DOCUMENT RESUME

ED 202 447 HE 014 033

AUTHOR	Stampen, Jacob
TITLE	The Financing of Public Higher Education. AAHE-ERIC/Higher Education Research Report No. 9, 1980.
INSTITUTION	American Association for Higher Education, Washington, D.C.; ERIC Clearinghouse on Higher Education, Washington, D.C.
SPONS AGENCY	National Inst. of Education (DHEW), Washington, D.C.
PUB DATE	80
CONTRACT	400-77-0073
NOTE	98p.
AVAILABLE FROM	Publicatons Department, American Association for Higher Education, Suite 780, One Dupont Circle, Washington, DC 20036 ($3.00 members, $4.00 nonmembers).
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	*Access to Education; Accountability; Educational Economics; Educational Philosophy; Educational Policy; Educational Quality; Equal Education; Federal Aid; *Higher Education; Need Analysis (Student Financial Aid); *Public Education; *Public Policy; State Aid; State Colleges; Student Costs; *Student Financial Aid; Theories; *Tuition

ABSTRACT

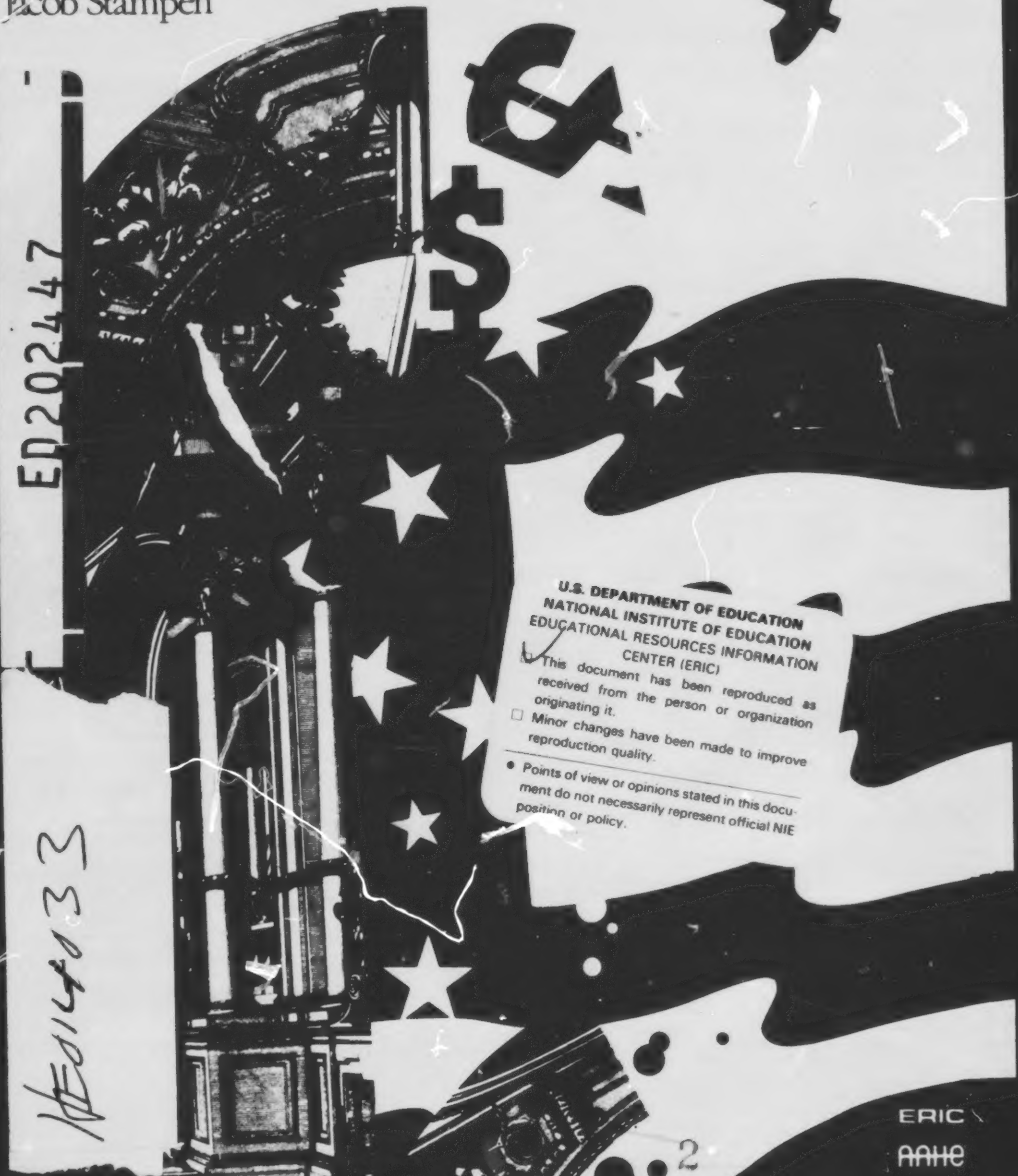
In the United States, society and individuals share the expenses of collegiate education, making it possible to provide higher education for a much larger percentage of youth than in many countries. At the same time, maintenance of low tuitions through public subsidies has provided reasonable assurance of accessibility and equality of public education, institutional autonomy, and support for institutional programs. The effectiveness and equity of socially subsidized low tuitions have been challenged by economists in recent decades. Among arguments: since students benefit directly from education, they should be required to pay a larger portion of the costs, despite foregone earnings and existing expenses, and further, tax laws cause the poor to subsidize the rich. More recently these arguments have been challenged on both economic and philosophical grounds; recent evidence suggests low tuition supplemented by student aid serves accessibility and maintains academic quality better than high tuition and large amounts of student aid. The challenges have not justified or resulted in great modifications to the public low-tuition system, but the basic funding pattern adopted by the federal government will be critical to societal quality and essentially irreversible. Three questions stand out for further study: (1) How effective is need-based student aid in increasing participation of low-income students? (2) How can student aid programs be refined so need analysis and aid distribution can be simplified and student, institutional, and government accountability be clarified? and(3) Is it feasible to maintain high access levels with low tuition and stable or declining student aid? (Author/MSE)

Report Nine 1980

THE FINANCING OF PUBLIC HIGHER EDUCATION

Jacob Stampen

ED202447



U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
● Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

HE014033

ERIC
AAHE

AAHE-ERIC/Higher Education Research Report No. 9, 1980

The Financing of Public Higher Education: Low Tuition, Student Aid, and The Federal Government

Jacob Stampen

Prepared by
ERIC®
Clearinghouse on Higher Education
The George Washington University

Published by
AAHE
American Association for Higher Education

ERIC® Clearinghouse on Higher Education
One Dupont Circle, Suite 630
Washington, D.C. 20036

American Association for Higher Education
One Dupont Circle, Suite 780
Washington, D.C. 20036

This publication was prepared with funding from the National Institute of Education, U.S. Department of Education, under contract no. 400-77-0073. The opinions expressed in this report do not necessarily reflect the positions or policies of NIE or the Department.

Foreword

There are several basic values that permeate the discussion of financing higher education. These values are:

- Higher education is no longer a luxury but increasingly a necessity for individuals to succeed in today's more sophisticated, technological, and complex society. Therefore, those persons having the intellectual capability should be encouraged to further their education and should not be hindered by their financial limitations.
- The family, along with the student, is primarily responsible for the financing of that student's education. Only after they have made reasonable effort and sacrifice to pay for the education, should the student receive financial aid.
- Public higher education institutions have provided great access because of their low tuition and liberal admissions requirements. However, they have been criticized because the wealthy pay no more than the poorest families, thus putting a disproportionate burden on the poor.
- Higher education should not be just for the rich. Society has a responsibility to see that there is equal educational opportunity regardless of a family's financial well-being.

The AAHE-ERIC/Higher Education Research Report series has examined several of these values. In 1975, the purposes and impact of student aid were reviewed in Report No. 10, *Applying the Goals of Student Financial Aid.* In 1977, Larry L. Leslie analyzed the degree of success that had been made in achieving the goal of equal educational opportunity in his Research Report No. 3, *Higher Education Opportunity: A Decade of Progress.* The Research Report series again returns to this important topic with this report.

Jacob O. Stampen, senior research associate for policy analysis at the American Association of State Colleges and Universities, reviews the relationship of low-tuition public institutions with the goals of equal educational opportunity and the underlying assumptions of financing higher education. He examines the research on levels of tuition, types of student aid, and enrollment, and the interaction of these elements.

In light of proposed higher education funding patterns that indicate a significant decrease in both student financial aid and state support for public higher education, this report provides a timely analysis of the current literature and should be very useful to those who are involved in this continuing debate.

Jonathan D. Fife
Director
ERIC® Clearinghouse on Higher Education

Acknowledgments

In higher education the issues of low tuition, student aid, and the federal government are highly charged with emotion, and difficult to deal with. It was, therefore, with a mixed sense of caution and adventure that the author addressed these issues as they pertain to recent developments in public higher education financing. The author especially wants to thank and acknowledge the following scholars for their help: Christian K. Arnold, National Association of State Universities and Land-Grant Colleges (NASULGC), provided historical perspective and indispensable assistance in clarifying meanings and ideas. Russell I. Thackrey, former chairman of NASULGC, and W. Lee Hansen, professor of economics, University of Wisconsin-Madison; contributed challenging criticism and important insights into the tuition and student-aid issues. Carol Frances, chief economist of the American Council on Education (ACE); Susan Nelson, The Brookings Institution; and John Mallan, American Association of State Colleges and Universities; gave helpful advice in the early stages of writing. Patricia Smith, ACE, was a particularly dependable guide to understanding the workings of the federal student-aid programs, and Cathy Henderson, ACE, was a source of much useful insight for interpreting higher education statistics. Responsibility for content and interpretation in this report rests, of course, solely with the author.

Contents

Overview 1

Introduction 5
Profile of public higher education 10
Plan of study and approach to analysis 12

Low Tuition or Student Aid: Economists Perceive an Issue 14
Reaction in the early 1970s 19

Low Tuition, Student Aid, and Work: An Evaluative Sketch 37
Low tuition: statistical evidence of effectiveness 38
Substituting for free tuition: the CUNY case 39
Loan and work programs: the search for non-public funding 44

Decisions, Trends, and New Issues 48
Decisions, intentions, and trends at the federal level 48
Unresolved problems at the federal level 55
Political challenges to federal student aid in the late '70s 60
Decisions, trends, and new issues at the state level 64
New issue: impact of federal student aid on states and institutions 68
Accreditation 70

Assessment 74
Recent change and public higher education finance 76

Bibliography 79

Tables and Figures

Table 1: Estimated effects on enrollment of $100 tuition reduction 30

Table 2: Federal support for major programs of assistance to postsecondary education students 52

Table 3: Aid recipients and total undergraduate students by income and type and control of institution, 1978-79 61

Table 4: Full-time enrollment in colleges and universities—all students and minority students, 1970 and 1978 62

Table 5: Headcount enrollment by institutional type and control 67

Table 6: Per student support for higher education by source—public and private institutions, 1968-77 68

Figure 1: Tuition, room and board, and the Consumer Price Index—public and non-public institutions, 1968-78 65

Overview

Education—that is, the organization, preservation, and transmission of knowledge and skills—is a societal necessity, and one of the first things all societies do is to provide for the education of the young. As societies advance and become more sophisticated and complex, the level of education required for effective functioning in the society increases.

In all modern societies, this progression has made formal education necessary through at least the teenage years for all members of the society. The education through those years is generally compulsory and is provided at the expense of the society at large.

But today, in developed societies education beyond this minimum level is required of a large percentage of the population if the society is to survive. Traditionally, in the Western European countries, this advanced education is provided largely by the society, with the students and their parents paying little or nothing directly but with access rationed by the number of students admitted to colleges or universities. Here in the United States, we departed from that pattern by supplementing societal subsidies for instruction with tuitions and fees and requiring students to pay for their own living expenses. This societal-personal sharing of the expenses of collegiate education has made it possible for the United States to provide higher education for a much larger percentage of its youth than traditionally has been true of the more heavily subsidized and controlled European system. At the same time, the maintenance of low tuitions through the public subsidies has provided reasonable assurance of accessibility and equality of collegiate opportunity, institutional autonomy, and substantial support for institutional programs.

These public subsidies historically were provided by the states, but following World War II, the federal government became increasingly involved in the financing of higher education. Based on the principle that no academically qualified young person should be denied a collegiate education simply because his or her family was poor, the bulk of these federal funds gradually took the form of student aid targeted for the needy.

The effectiveness and equity of socially subsidized low tuitions were challenged in the 1960s and early 1970s by a number of economists. Some argued that since students benefited personally from their college education, they should be required to pay a larger percentage of its cost, even though the students were already responsible for living costs, foregone earnings, and a substantial share of instructional costs through tuition payments. Further, the tax laws in the states, some argued, were such that, the public funding of higher education was, in effect, causing the poor to subsidize the rich. Both equity and accessibility were ensured by requiring students to pay all—or most—of the cost of their education, but providing public-funded aid for those who could not afford to pay the full cost.

More recently, the conclusions reached by these critics have been challenged on both economic and philosophical grounds. Recent evidence suggests that low tuition supplemented by student aid serves accessibility and maintains the quality of academic programs better than does high tuition in combination with large amounts of student aid.

This paper attempts to provide a historical overview and analysis of these competing philosophies, and the studies on which they are based, by linking three aspects of the low-tuition issue: the policy debate among academics; the results of recent studies and experiments on relationships among tuition, student aid, and enrollment; and finally, the decisions made by federal and state governments pertaining to public higher education finance.

The challenges have neither justified nor resulted in substantial modifications to public higher education's low-tuition system. In public higher education, which currently educates approximately eight out of ten college students, student aid has evolved thus far mainly as a supplement to low tuition. This has occurred, in part, because little, if any, compelling evidence emerged from research or experience indicating that combinations of scholarships, loans, and work programs could be substituted to maintain the high levels of educational service and college participation mandated by public policy makers and society itself.

Student loan strategies, favored by some economists as an alternative to low tuition, have suffered from a reluctance of students to borrow or of private lenders to invest in human resource development unless heavily subsidized by governments. In fact, federal loan subsidies now amount to approximately 50 cents for each dollar lent by private banks. Research also has shown that loans are less than half as effective in terms of attracting students as low tuition or student grants, particularly for students from low-income families.

Private colleges and universities continue to be viable, despite the retention of low tuition in public higher education and the expansion of supplementary student aid, because federal and state programs were adjusted to provide increased support for private institutions. In fact, public support for public and private higher education has been accommodated, balanced, and integrated to the point where decisions not to support public higher education at traditional levels probably would result in sharp reductions in college access. Many private institutions that currently depend on the existing mix of federal and state higher education assistance programs also would suffer severe damage.

It is no exaggeration to say that the basic funding pattern eventually adopted by the federal government will be critically important to the quality of our society in the future and will be essentially irreversible.

With respect to questions requiring further study, three stand above others in importance. First, how effective is need-based student aid in increasing college participation rates among students from low-income families? Historically, the large increases in higher education participation occurred during the expansion of public higher education when low tuition was primarily relied upon to encourage college access. Also, despite massive increases in student aid, quantitative evidence has not revealed substantially increased participation by students from low-income families, the targets for the rapid expansion of federal student aid since the early 1970s. However, one must be cautious in concluding that student aid has been ineffective. For example, during the 1970s minority group students, most of whom come from low- and lower-middle-income families, enrolled at percentage rates several times greater than majority group students, and the problem of detecting enrollment changes due to student aid may have more to do with poor data than with the lack of actual impact.

Second, how can student-aid programs, particularly those of the federal government, be refined so that needs analysis and the distribution of aid can be simplified and student, institution, and government accountability be clarified? Federal need-based student aid has been accompanied by increased government involvement in institutional policy making and by weakly designed formulas and regulations that threaten the effectiveness of student aid, the autonomy of colleges and universities, and long-term political commitment to the goals of student aid.

Third, is it feasible to maintain high levels of access by combining low tuition with stable or declining amounts of student aid? This possibility should be considered since student-aid appropriations have been challenged with increasing frequency in recent years. It might be possible by increasing institutional involvement in the packaging and distribution of student aid to reduce inefficiencies at the state level in the support of institutions and at both state and federal levels in the support of students. Under the existing systems, student aid is intended to be distributed uniformly according to family and individual income with the result that, when student aid is increased, most of the new dollars flow to students already enrolled. Thus, it is difficult to know on a case-by-case basis whether student aid mainly increases dollars available to students or enables students who would not otherwise attend college to do so.

12

Introduction

Following a century of trial-and-error experimentation, the funding patterns for American colleges and universities remained remarkably stable during the 75 years preceding World War II. Although all the institutions received support from both public and private sources, the public institutions were funded mainly by state appropriations from tax revenues, and funding for the private institutions came mainly from endowments provided by private gifts and grants and from subsidies from sponsoring private groups, particularly religious denominations. Both depended on student fees and tuitions to meet operating deficits left by shortfalls in the basic types of support, but this dependence was always greater for the private institutions, especially after the 1913 enactment of federal income tax.

Following World War II, the federal government became involved, starting with the GI Bill aimed at helping veterans and with project grants and contracts for research at academic institutions. Eventually, this involvement, amounting to $14 billion a year in 1978 (Finn 1978), included programs that at least promised support for almost all aspects of the academy: undergraduate student assistance, graduate fellowships and traineeships, construction and equipment grants, loans for dormitory construction, extension services, and so forth.

A central difficulty with this involvement was, and is, that it grew without the benefit of any overall plan or policy concerned with a federal role in the funding of higher education. Each program was established to satisfy a real or imagined specific need with little or no reference to the effect of one program on other programs, on the general health and vitality of the institution, or on the traditional sources of funding. Each program rested on its own justifications, with a resultant Topsy-like growth of an almost bewildering array of separate, specific categorical programs "supporting," in their totality, almost everything connected with an institution of higher education except the institution itself (Babbidge and Rosenzweig 1962).

The climax of these activities occurred in the 1960s as these programs were enacted in law and established in practice. Following this period, however, a shakedown or reevaluation was carried out largely through the reauthorization and reappropriation processes. In these processes, political and fiscal considerations usually determine the outcome and there is little opportunity for careful consideration of policy or philosophical issues. Nonetheless, changes have taken place, and, in general, they have fostered the growth of categorical programs at the expense of noncategorical institutional support. For example, despite strong appeals for stable, predictable, institutional funding for scientific research at the college and universities, federal funding for academic research continues to be concentrated in short-term project grants. What institutional support there was has all but disappeared under a decade-long rejection of institutional aid by recent federal administrations. In the area of instruction, federal funds have become concentrated on student assistance, again with the concurrent erosion of the institutional support programs. This development has taken place in the political arena, with little consideration given to the effect on the traditional reliance on low tuition for maintaining equality of access or on maintaining the vitality of the institutions that federal assistance encourages students to attend.

This analysis is aimed at exploring the following issues: Has the development of a massive program of federal student aid rendered obsolete the concept of low tuition? Is it feasible for society to maintain broad access and advance higher educational opportunity without low tuition for public institutions? Should student aid be considered as a supplement to low tuition limited to the exceptionally needy, or should it be considered as a primary means of financing public and private higher education as well as access for more broadly defined "disadvantaged groups?"

These issues have been debated since the early 1960s when efforts began that led to the passage of the Higher Education Act of 1965. The student assistance that emerged from this act and from the Higher Education Amendments of 1972 focused on the traditional purpose of putting collegiate education within reach of the exceptionally poor. With this focus, it was argued logically that raising tuitions at public institutions would be counterproductive, since such increases would inevitably decrease the effectiveness of the aid provided.

However, passage of the Middle-Income Student Assistance Act (MISAA) in 1978 marked a significant departure from that original purpose. This shift in emphasis and purpose was accomplished by easing family income limits on participation in the federal aid programs. Basic Educational Opportunity Grants (BEOG) were extended to many students from families earning as much as $25,000 annually, and the federally subsidized Guaranteed Student Loan Program (GSL) became available to all students, regardless of family income.

Nowhere in the Act of 1965, the Higher Education Amendments of 1972, or the MISAA Act of 1978 is there any statement providing guidance or establishing objectives regarding institutional tuition level vis-a-vis federal student aid. Because of this, each institution faces the choice of maintaining tuitions at the lowest possible level or of raising tuitions to "harvest" the federal student aid as an indirect institutional subsidy.

State governments have similar choices in determining state student-aid policies. State student-aid programs can be coordinated with federal programs to ensure that needy students who are ineligible to participate in federal programs receive necessary aid, or that federal funds can be used to release state assistance funds for other uses.

This policy of silence in federal legislation on institutional tuition levels stems from, among others, the following factors:

1. In none of its programs relating to higher education has the federal government ever made any distinction between "public" and "private" institutions or even, in some programs, between proprietary (for-profit) institutions and nonprofit ones. By extending assistance eligibility to students at all types of institutions, the federal legislation could ignore some important distinctions stemming from state financing of public colleges and student financing of private colleges, even though, as many both in and out of government have assumed and as several courts have ruled, student assistance can be, or can become, a form of institutional assistance.

2. Prominent among the advocates of federal student aid were economists who maintained that all students who "could afford" to pay tuitions covering the full cost of instruction should be required to do so, and only those unable to pay should receive public assistance. Furthermore, they argued, federal student aid should lead to higher public college tuitions. There is little direct evidence that the high tuition economists influenced federal student-aid legislation. However, the economists' debate over low tuition frequently was referenced by the Carnegie Commission and the Rivlin report, which, in turn, influenced some of the key authors of the federal student-aid legislation. Certainly, the theses of the high-tuition economists also contributed to the decision of Congress to develop a national student voucher program in the form of the Basic Educational Opportunity Grant, instead of providing aid through institutions (Gladieux and Wolanin 1976).

3. Much of the political support for the concept of providing federal aid to all needy students came from representatives of private colleges. In addition to those who hoped that federal aid would be sufficient to enable low-income students to attend high-tuition colleges, there were those who hoped federal aid also could be used to narrow the tuition gap between public and private col-

leges by encouraging public sector tuitions to rise closer to private college levels (Gladieux and Wolanin 1976).

4. There is also a growing apprehension among representatives of both public and private institutions about initiating efforts to clarify the intent of federal student-aid legislation because there is no clear evidence that a substantial number of institutions have unfairly exploited federal student aid. In addition, it is difficult to devise legislative maintenance-of-effort language that does not threaten to regulate institutional tuition policies.

During the early 1970s, tuitions at many public institutions consistently outpaced inflation. Since 1975, there has been, with some notable exceptions such as the City University of New York, little evidence that federal student aid has contributed to tuition increases at public colleges, despite the possibility of such action when the amount of aid granted is related to tuitions and fees charged by institutions.

There are several apparent reasons for this restraint by the public institutions. Until the fall of 1979, federal grants were targeted almost exclusively to students from very-low-income families, and the rate of inflation during this period was very high. At the same time after-tax incomes did not increase as fast as inflation (Frances 1979; Karr 1977; Nulty; 1977). It was, consequently, difficult for institutions to raise tuitions faster than inflation, especially since governors and legislators in states where public institution tuitions had increased rapidly in the early 1970s had discovered that there was not enough student aid to offset the enrollment-eroding effects of the increases (Stampen 1979).

Since the middle 1970s, federal and state student aid has continued to increase, and some people argue that with MISAA, there is enough available aid to ensure adequate access and choice for able students from all low- and middle-income families (Breneman 1978). If, in fact, a new threshold of federally guaranteed access has been reached, and particularly if the federal government continues to expand assistance to reach students from higher income families, public institutions and, especially, state governments, will be tempted to reevaluate funding policies supporting low tuitions.*

---

*The World War II GI Bill covered college attendance costs at any institution in which a veteran enrolled. Therefore these grants were highly price sensitive. In response, between 1945-46 and 1947-48, tuition as a percentage of instructional cost increased from 21.4 to 40.5 percent at public colleges and from 49.7 to 66.7 at private colleges. Part of the explanation for the increase in the public colleges was that the law allowed charging veterans non-resident tuitions. See June O'Neil, "Sources of Funds for Colleges and Universities." Technical Report for the Carnegie Commission. Washington, D.C.: The Brookings Institution, 1968, pp. 8-9.

With the enactment of MISAA, this question will be raised with increasing frequency: should states continue to provide appropriations adequate to maintain low tuition or should they place greater reliance on federal and state student aid, coupled with higher tuitions?

The MISAA program is not the only factor exerting pressure for a reevaluation of public higher education financing. Among other factors is the expanded definition of postsecondary education adopted by the federal government in the Higher Education Amendments of 1972, which extends federal—and, increasingly in emulation, state assistance—to students attending proprietary and other nontraditional schools. Participation in the assistance programs by such institutions has grown rapidly. For example, in 1976 proprietary institutions accounted for 34 percent of all postsecondary institutions eligible to participate in the four major federal student-aid programs (Basic Educational Opportunity Grants, Supplemental Educational Opportunity Grants, College Work/Study programs, and National Direct Student Loans). In terms of enrollment these institutions represent only a small fraction, with students attending them receiving only eight percent of funds for these programs in 1976. However, the flow of student-aid dollars to proprietary institutions has increased as a percentage of funds for all institutions since 1976 (National Association of Independent Colleges and Universities 1978).

Another factor generating pressure on the traditional funding patterns for public higher education stems from concern over the welfare of private institutions of higher education. During the 1970s this concern was reflected in the rapid expansion of state programs providing assistance to students attending private colleges. Between 1969-70 and 1979-80 funds for state student aid increased from $200 million to $852 million, with, in 1979-80, students at private institutions receiving 59 percent of these funds. Virtually every state had at least one need-based student-aid program by the end of the 1970s, and several states had provided other assistance to students attending private institutions, including tuition equalization grants not based on need. Some states provided direct institutional support based on the number of state residents enrolled or the number of degrees granted (National Association of State Scholarship and Grants Programs 1979-80).

So far, studies as to whether these programs grew at the expense of funding for public colleges and universities appear inconclusive. One study found that, among ten states, only in New York did it appear reasonable to suspect that funds had been diverted from public to private institutions. In three states (California, South Carolina, and Ohio), state aid to public and private institutions appeared to move together, while in the six remaining states the pattern was inconclusive (Nelson 1978). However, the addition of millions of dollars in higher education expenditures in new areas seems bound to affect expenditures in traditional areas, and, as state aid for private postsecondary education continues to expand, the question of negative impact on public colleges will be studied with increased seriousness.

Another pressure stems from the prediction of declining enrollments in the 1980s and the possible effect of these decreases on institutional appropriations and college attendance costs. In almost all states, public college appropriations are linked to enrollments, but the relationship between tuition and per-student state appropriations is rarely established by firm policy. For example, in 1976 among public four-year colleges, revenue as a percentage of total educational and general expenditures ranged from 10 percent in California to 51 percent in New Hampshire, (National Center for Education Statistics 1976-77). However, in states where enrollments decline sharply in the 1980s fixed costs such as faculty salaries, equipment, and debt retirement cannot be cut back sufficiently to keep pace with any significant decreases in enrollment. Therefore, the students who do attend may face higher tuitions simply because there are fewer students to share the expected student contribution to instructional costs.

Finally, there is the legacy of policy research that is widely believed to be hostile to low tuition and supportive of evolution toward financing higher education through students. This will be discussed in the next chapter.

Thus, there are several factors seriously challenging continued reliance on publicly subsidized low tuition to ensure equality of access. However, there are also obstacles in the path of greater reliance on student aid. There is uncertainty about the effectiveness of the various forms of student aid in drawing and sustaining enrollments, particularly with respect to loans. Governments have been successful in pulling large amounts of private capital into student-aid systems, but not without heavy subsidies for students and banks and with high loan-default rates, which together make loans expensive to government. Major problems also have emerged with respect to the equitable distribution of aid, as many deserving students fall between the cracks of existing programs, particularly those programs managed on a nationwide basis and dependent on centralized data processing.

Profile of public higher education

Because of the expanded definition of postsecondary education, it is important to place public higher education in perspective with other postsecondary education elements.

In 1978, public higher education consisted of 1,607 institutions (560 four-year and 1,234 two-year) enrolling 8.8 million students. These numbers accounted for 50.5 percent of the nation's colleges and universities and 77.6 percent of the total enrollment in higher education (TIAA-CREF 1978-79). Also, in 1978-79 public colleges educated the following percentages of ethnic minority and low-income students: black, 80 percent; American Indian, 88 percent; Hispanic, 76 percent; Asian American, 83 percent; from families earning less than $20,000, 76 percent; from families earning less than $5,000, 83 percent (NCES 1978b). In 1977-78, the public sector granted the following percentage of degrees: associate, 87 percent; bachelors, 68 percent; masters, 65 percent; doctorate, 64 percent (NCES 1978a; 1977-78).

In 41 states more than 80 percent of state residents attending colleges attend public institutions. In only five states do less than 75 percent attend public institutions (NCES 1980). Yet the number of private (2,549) and proprietary (2,259) institutions in the United States far exceeds the number of public institutions (TIAA-CREF 1978-79; National Association of Independent Colleges and Universities 1978). These statistics highlight the facts that the responsibility for providing college access and social mobility rests largely with public institutions, and that public institutions are, in almost all instances, larger than nonpublic institutions.

The larger average size of public institutions is partially explained by their broad missions. These institutions are shaped by state laws and traditions mandating that, in exchange for government support, public colleges impartially provide service to all citizens who can benefit from higher education. In contrast, private and proprietary institutions sometimes exercise greater license in selecting students on the basis of special characteristics or attraction to institutionally favored curricular or learning environments. The larger enrollments of most public institutions also enable economies-of-scale resulting in a broad range and depth of programs.

This is illustrated in recent data reported by the Kentucky Council on Higher Education (1979). This state, according to the National Center for Education Statistics (NCES), approximates the median in terms of private college attendance (calculated from data in NCES Digest of Education Statistics, 1980a). In that state, public and private colleges offered degrees in the same major disciplines, but private colleges offered only about one-half as many majors per discipline as the public colleges. Furthermore, most of the private institutions were heavily oriented toward the liberal arts. The state's four-year public colleges, on the other hand, offered more than two-thirds of all degrees in the arts and sciences and, in addition, provided substantially larger proportions of degrees in agriculture, business, communications, computer sciences, education, engineering, fine arts, the health professions, home economics, cross-disciplinary studies and public affairs (including public administration), social work, and law enforcement.

Within the federally expanded definition of postsecondary education, then, public higher education clearly constitutes the largest element. In fact, public higher education today may bear a larger share of responsibility for developing the nation's human resources than at any time before in the nation's history.

Plan of study and approach to analysis

This study will review the literature covering three aspects of public higher education financing during the 1970s and alternative courses for financing in the 1980s: (1) financing issues generated by research in the late 1960s and early 1970s, (2) decisions or nondecisions made by policy makers that may have been influenced by the academic debate, and (3) new issues generated by feedback from policy during the 1970s.

In this analysis, the academic debate over low tuition or student aid, which was especially active in the late '60s and early '70s, is viewed as an attempt among academic policy researchers to define an issue and to recommend changes in the way public higher education should be financed. More specifically, chapter 2 reviews recent research addressing topics fundamental to the financing issue, such as the societal benefits of the value of education, the individual benefits of higher education, the equity and efficiency of low tuition and student aid, and the relationship between the cost of college attendance and the demand for it. Chapter 3 discusses the issue definition process with an attempt to evaluate positions taken in the academic debate in light of recent research and a case study of the City University of New York.

While chapters 2 and 3 focus on a debate over ideas, chapter 4 outlines decisions that were made in federal and state political arenas during the '70s, together with some of the trends and issues reflecting the consequences of those decisions. In some respects the academic debate appears to have influenced political decision making, perhaps mainly in the federal government's choice of student aid as its vehicle for expanded involvement with higher education. However, other factors such as the federal decision-making process itself and its regulatory structure for implementing legislative intent also have been influential. These, in fact, have changed higher education policy making in ways unanticipated by the academics' debate. For example, federal student aid, which earlier often was perceived as a vehicle for liberating institutions from government regulation, was transformed in the political arena into a vehicle for increased regulation.

Chapter 5 concludes with the author's assessment of whether public higher education's traditional financing system should be altered in light of recent changes and whether other measures should be taken to better assimilate federal student aid with other forms of assistance for students and institutions.

Low Tuition or Student Aid: Economists Perceive an Issue

Why did economists perceive an issue in the financing of public higher education? Five factors stand out as instrumental in the development of low tuition as a controversial issue in the late '60s and early '70s.

First, except for project-grant support for research and for the World War II and Korean War GI Bills, private colleges and universities had largely been excluded from the mostly state-funded expansion of higher education in the post-World War II years (McConnell, Berdahl, and Fay 1973).

Second, when the federal government became actively involved after Sputnik—first with the passage of the National Defense Student Loan program in 1958 with the College Work/Study program in 1964, and the Educational Opportunity Grants, the Educational Facilities Act, and other parts of the Higher Education Act of 1965—private and, in some cases, proprietary institutions, following the precedent of the GI Bills, were eligible to participate in the federal programs. Involvement of the private sector raised concern among policy makers about the "tuition gap" between public and private institutions of higher education (Gladieux and Wolanin in Breneman and Finn 1978). This concern may have been influenced by the fact that while benefits under the World War II GI Bill were based partially on the cost of tuition at each institution, the Korean and Vietnam bills provided flat grants to help veterans with tuition and living expenses without regard to tuition levels at the institutions attended. Further, after the passage of the Higher Education Act of 1965, liberal congressmen often promoted aid to low-income students in the spirit of President Johnson's "War on Poverty."

Closely related is the third factor of congressional and administrative concern about the constitutionality of public support for sectarian institutions. Generally, direct institutional support was considered unconstitutional, but increasingly it was argued that specific-purpose categorial support and assistance to students, rather than to institutions, passed the constitutional litmus test.

Fourth was the concept of student needs analysis stemming from the seminal work of John Munro and others. The development of methods for estimating a student's ability to pay college costs and the amount of student aid needed to "equalize" educational opportunity for students from various family income groups influenced the thinking of economists.

Finally, there was the concept of equal opportunity which had received only marginal political support until the emergence of the "War on Poverty." And until the development of needs analysis there was no way of targeting resources to help achieve equal opportunity.

These five factors had roughly outlined the tuition issue years before the emergence of the economists' debate over higher education financing. Controversy over higher education financing and, in particular, low tuition, increased sharply after the publication in 1967 of the "Zacharias Plan" (Zacharias 1967). This plan was influenced by the ideas of the economist Milton Friedman, who, beginning in 1955, maintained that higher education could to a large extent be financed through student loans, repayment of which would be contingent on the level of future income. Under the Zacharias plan, all students would be eligible for government loans to cover expenses while enrolled in college, to be repaid in small increments added to income taxes over much of their working lifetimes. Former students who prospered would repay more than they originally borrowed, and, thus, to some extent would subsidize others. Although the plan did not state it explicitly, it was suggested that tuitions could rise sharply to account for a larger percentage of the total cost of the education.

In 1968, Friedman's ideas received a wider audience when he published an article in *The Public Interest* in which he argued that higher education should operate without public subsidies in accordance with "free market" principles, with students being charged tuitions covering the full cost of instruction.

In 1967, economists W. Lee Hansen and Burton A. Weisbrod attacked, in a study for the California State Legislature entitled *Benefits, Costs and Finance of Public Higher Education*, the equity and efficiency of California's public higher education system. The study concluded that the state's low-tuition system, viewed by many public higher education advocates as a model for the nation, was both inefficient and inequitable and that the situation could be improved if government assistance to higher education were limited largely to student grants and loans based on financial need. In 1970 Hansen and Weisbrod published a study on higher education financing in Wisconsin that called for higher tuition combined with student grants based on need (Hansen and Weisbrod 1970; Kellett Commission 1970).

The Rivlin report (1969), reflecting some of the emerging sentiments for a new approach to college financing, recommended that federal aid to higher education consist of grants and loans to students from low-income families, coupled with cost-of-education allowances to institutions in proportion to the number of low-income students they enrolled. Other writers whose ideas for student-centered reforms in college financing and for higher public college tuitions included G. S. Becker, R. A. Freeman, Joseph Froomkin, June O'Neil, and Robert Hartman.

The collective ideas of the advocates of financing public higher education through the student evolved into the high-tuition argument. This argument had several versions but in aggregate it might be summarized as follows:

Low tuition is inequitable because it encourages disproportionately high "consumption" of higher education by the rich and the middle class and disproportionately low "consumption" by the poor. It is inefficient because many students can afford to pay more than the established tuition. Also, since higher education has few measurable societal benefits, but easily measurable individual benefits (e.g., higher lifetime earnings), the student is the primary beneficiary of higher education and should pay for it. Therefore, free market competition should govern supply and demand, except for those with incomes so low that college access is precluded. Such people should receive grants and loans subsidized by those who can afford the market price.

Other arguments were that, under a system where higher education was financed through students, public and private colleges could compete as economic equals and this would improve the quality of academic programs. Furthermore, with government assistance flowing through students, there would be no threat of public control over private institutions, and public institutions could be liberated from excessive government regulation (Gladieux and Wolanin 1976). Finally, governments could realize substantial savings by making the well-to-do pay their own way and could reinvest these savings in other worthy social priorities or return them to taxpayers. In sum, "free market" financing would be equitable to the needy, promote freedom of choice, remove burdensome regulations, and improve the quality of education through fair competition among institutions.

Some studies suggested that the institutional financing system upon which low tuition was based distributed tax benefits from the poor to the rich (Hansen and Weisbrod 1969; Windham 1970). Another finding, replicated in several studies, was that education, in comparison with the circumstances of birth, is ineffective in terms of individual advancement and social mobility; in other words, education doesn't matter but family background does (Coleman 1966; Jencks 1972), and there is little to be gained as far as equalizing opportunity is concerned in subsidizing low tuition at public colleges.

However, not all the economists agreed with the research upon which the high-tuition position was based. For example, Brookings Institution senior economist Joseph Pechman, who argued that the Hansen and Weisbrod study was flawed and that correction of the errors would reverse the conclusions, contended that higher education provided many societal benefits but that the state of the art in social science simply was not advanced enough to measure them. He insisted that the policy argument fell most properly in the domain of societal rights and responsibilities and should not be mixed with tax policy (Pechman 1970 and 1971; Hansen and Weisbrod 1971; Hansen 1972; Hartman 1970).

Another source of disagreement stemmed from the fact that public higher education had, with the help of low tuition, made mass higher education more nearly a reality in the United States than in any other country in the world. Many of those who had observed and participated in the public higher education movement were not willing to concede that its benefits were primarily personal, and they turned to history to rebut the critics. For example, historian Henry Steele Commager (1961), like Pechman, found no reason to distinguish among higher, secondary, or elementary education in terms of public financing rationales, or, for that matter, between education and fire and police protection, highway systems, slum clearance, national parks, old-age pensions, or unemployment compensation. With respect to education in general, his view was, "Society requires education because it is a paramount interest in an educated citizenry." With respect to higher education, he said: "The College is today what the high school was in the nineteenth and early twentieth century. In 1900 . . . our total high school population . . . was roughly one student in every 150 persons. But today [there is] roughly one [college] student for every forty or forty-five persons." Commager also said, "It is a fallacy to suppose that those who enjoy the advantages of a university education will not eventually pay for them. . . . If they do not return to society the full-cost of their education, income taxes can be adjusted to the point where they will do so," (p. 3). In short, to Commanger, low tuition is justified by social necessity, and, even so, the cost of the educational subsidy will be returned to the state through increased tax revenue over time.

Another example of the lessons-of-history argument was expressed by Elvis J. Stahr, then president of Indiana University:

> A curious theory or rationalization has arisen that it is the student alone who benefits from higher education and therefore he alone should pay for it. The theory in part grew out of the observation that over the lifetime of a student, he is likely to have much higher earnings than if he hadn't attended college. This is, of course so, and applies to high school as well. But it is a strange warping of logic to reason that since the student will in time benefit, he must be charged for future benefits while he is still a student and no one else should be charged at all, even though everyone else benefits too! This pattern of thinking overlooks two basic considerations: 1) the princi-

> ple, recognized by our forefathers, that society does indeed benefit from an educated citizenry, indeed cannot survive without it, and therefore in equity should bear at least part of the burden; and 2) the fact that graduates become members of society and quickly begin to repay the cost of their education in taxes and in other ways during their productive years. Their education is far from a free ride at society's expense; for they with their higher earnings are keeping the investment in education constantly renewed. . . . The developing countries, striving to move forward, haven't a chance of succeeding without more and better education. The point is neither have we . . . May I remind you that the cost of an unemployable to society is far greater than the relatively small investment required of society for his education. No one proposes college education for everyone; but I submit that the vital thing is to include and exclude not on the basis of ability to pay, but on the ability to learn. (1965)

Higher education, it was pointed out, induced value and attitudinal changes that made its recipients more self-reliant and less likely to commit crimes or to become dependent upon the state for unemployment compensation or welfare. Higher education also had intergenerational effects stemming from increased family prosperity, stability, and productivity. For these and other reasons, advocates of low tuition maintained that society, as higher education's primary beneficiary, should provide the larger part of its financial support, that it was in the public interest for government to remove economic barriers for all able to benefit from higher education, and that the function of student aid should be that of supplementing the public subsidy for the most needy student's (Bowen 1977).

The debate over high or low tuition might be characterized as a dialogue between two groups addressing each other in different languages. The low-tuition advocates did not, for the most part, directly argue with the high-tuition economists, and these economists mostly ignored the lessons-of-history arguments, basing their judgments almost solely on the theory-building and quantitative research that characterized the "new wave" within the social sciences.

From the neutral perspective, the weight of evidence during the early years of the debate probably seemed to rest on the side of high tuition. Most of the research on higher education financing supported it, as did other "discoveries" about education. Furthermore, the high-tuition argument provided a rationale serving the interests of a variety of special interest groups: for state governments, it suggested that tax dollars could be saved without sacrificing educational services; at a time when the economy was weakening for the university administrator, it promised to increase revenues from a seemingly undertapped source; for the private college, it offered increased support from both students and government;

and for the "free market" economists, it seemed like a "rational" alternative to the existing system.

Reaction in the early 1970s

The debate over the financing of higher education was evaluated by no less than seven national commissions and task forces in the early 1970s: the first Newman report (1971), the Carnegie Commission on Higher Education (1973), the Committee on Economic Development (1973), the National Board on Graduate Education (1974), the National Council on Independent Colleges and Universities (1974), the second Newman Task Force (1973), and the National Commission on Financing Postsecondary Education (1973).

These groups accepted some of the logic and argument for high tuition. According to most of the commissions, the distribution of public subsidies for higher education was inequitable because the benefits of the public subsidy flowed disproportionately to students from middle- and upper-income families. They also accepted the arguments that the existing system was inefficient because many of those who received tuition subsidies would have attended college without them, that loans should play a major role in student aid, and that students should have a greater degree of choice among public and private colleges, although access generally remained the overriding priority. Therefore, since the benefits of higher education flowed more to the individual than to society and since family incomes had risen in real terms, tuitions at public institutions should be allowed to rise, public subsidies should be targeted to students from low-income families, and "choice" should be backed by public subsidies. As Howard Bowen observed, "indeed they [the commissions] point in the direction the system is already moving" (Bowen, in Young 1974).

At the same time, however, none of the commissions accepted Milton Friedman's notion that higher education could be completely student-financed and none advocated the elimination of institutional subsidies for public higher education. The Carnegie Commission and the Committee on Economic Development did recommend, however, that public college students pay tuitions 20 to 100 percent higher than they were paying at the time. Increased federal, state, and institutional aid should be made available to students from low-income families to compensate for higher tuitions. Essentially, the commissions recommended a redistribution of public funds for higher education. According to the Carnegie Commission, there was widespread distress in higher education because of, in part, the widening tuition gap between public and private colleges, but, mainly, because costs were rising more rapidly than income. Costs would continue to rise because of the labor-intensive nature of higher education. Therefore, public support was not likely to keep pace with costs, and the only available source for additional revenue seemed to be students and their parents.

The response to the report of the Committee on Economic Development offered by Allan W. Ostar, executive director of the American Association of State Colleges and Universities (quoted below in a press release), exemplifies responses by associations of public colleges and universities (See also Thackrey 1973):

> A proposal by a business group to double and triple the present tuition costs at public colleges is "a direct attack on millions of middle- and lower-income American families. . . ." There is no guarantee in the CED recommendations that lower-income and minority students would receive enough financial aid to attend college without large debts. "Experience with federal student aid programs proves that they are grossly underfinanced, and dependent on the shifting political priorities of bureaucrats, Congressional committees, and private bankers. . . ." The CED report appears to express the views of a few multi-billion dollar corporations and affluent private universities. It does not speak for millions of students, for veterans seeking an education, for labor union and farm families, nor for most public colleges and universities (AASCU 1973).

Howard Bowen, an economist who had served as the head of both public and private colleges, also expressed uneasiness about a prominent role for loans in higher education financing, the difficulty of managing massive student-aid programs, and the general proposition that students should bear a larger share of the higher education burden.

> Why at this stage of our history, when we still have the task of bringing millions of young people—many from ethnic minorities—into the mainstream of American life, and when there is so much educational work to be done for all classes, including adults, why are we striking out in a new direction? Have we been misguided over the years and are we just now realizing our errors? Or are we about to commit a colossal blunder?
>
> *On Access.* "Who can say that higher education should not continue to be available at low cost to assure ready access and encouragement for persons of all ages and conditions? Who can argue that high tuitions, means tests and long-term loans are really conducive to the widening and deepening of learning?"
>
> *On Academic Freedom.* "The proposal to raise tuitions might tend to diversify sources of support in public institutions and enhance academic freedom. However, I find no evidence that while tuitions are being raised states are relaxing their grip on their colleges and universities. Quite the opposite. On the other hand, the proposal

would move higher education along the path toward the market price or "jam factory" system of finance. If carried too far, it would impair the inner integrity of colleges and universities as institutions and convert them into enterprises responsive only to the market."

On Means Tests and Debt. "I recognize the importance of grants based on need, and loans, in a balanced system of student aid. It is when large amounts of money are involved that I become apprehensive. The means test is essentially undemocratic, bureaucratic, arbitrary and open to evasion. . ."

On Equity. "The largest single cost of higher education is the time and foregone income of students. This together with incidental expenses of higher education (not counting board and room) place at least two-thirds of the total cost on the student and his family. Institutional costs are on the order of only one-third the total . . . it would seem that a major portion of the institutional costs might equitably be borne by society, that is, government and philanthropy."

On Preserving the Private Sector. "For survival, the private institutions must first of all live up to the ideals of diversity and leadership. They must be useful to society in special and demonstrable ways. Second, they need a system of finance that will narrow the tuition gap and at the same time preserve their privacy. This system of finance . . . consists of tuition-offsets from government. . . . Another important part of the financial solution for the private sector is to strengthen the incentives for charitable giving to education. This would include retaining present federal and state tax-incentives and . . . [increasing] the effectiveness and equity of income tax deductions for charitable giving. There is need also for liberalizing property tax exemptions for private institutions."

On Adequate Financing. "If we are concerned about the possibility that upper-income families may receive subsidies, let us deal with that problem through the tax system, by requiring everyone to pay a fair share of the general tax burden, not by trying to convert the financing of higher education into a device for redistributing income.

Bowen's Overall Reaction to the Commission Reports. "I suspect that current thinking about higher educational finance, as exemplified in the six reports grows out of depression mentality and short-range perspective. In my judgment, these reports have not taken account of the enormous opportunities that lie ahead as our society shifts from the production of things to the provision of services and the building of a great culture. Nor have they really faced a future in which education may be truly open to persons of all ages and conditions, in which education would be rationed on the basis of desire to learn and achievement in learning—not by tuitions, means tests and willingness to go into debt" (Bowen in Young 1974, pp. 25-32).

Carol Frances, chief economist for the American Council on Education, joined Bowen in criticizing the policy ideas issuing from the commission reports (Frances, in Young 1974). As did Bowen, she disputed the inevitability of depressed public support for higher education. She acknowledged that certain conditions in the early '70s, such as the economic aftereffects of war, high inflation, cyclical downturns in corporate profits, inadequate commitments to equalize access to higher education, retrenchment in federal support for research, minimum-wage and collective-bargaining legislation, and the energy crisis created financial difficulties for colleges and universities. However, she judged most of these conditions either temporary or subject to solutions outside higher education and that they did not justify increasing the student's proportionate share of college costs.

In response to the equity and efficiency positions of the commissions, particularly those of the Committee on Economic Development, Frances observed that if rising tuitions caused sharp declines in overall enrollments at the same time that the tuition gap between public and private college tuitions was being closed, it might quickly become apparent that the tuition gap was not the primary source of private college distress since the pool of potential private college enrollees and transfers from public colleges would also shrink and lower enrollments would reduce both public and private institution finances. Similarly, loan proposals, which sounded plausible when first explained, did not receive much support from bankers unless large government subsidies were added. With respect to the students, the imperfections in the capital market could cause real problems in raising sufficient funds to displace low tuition as a means for making college attendance financially possible.

Frances noted that the implementation of the student-aid programs in the middle 1960s produced little evidence of progress in closing what she termed the "subsidy gap" that is, the difference between institutional funds specifically targeted for student assistance and the larger amounts actually spent for that purpose. This was a problem primarily for the high-tuition private colleges. To Frances, it appeared that the commissions were advocating the extension of the dubious benefits of this gap to public colleges.

The subsidy gap problem was related to another raised by the commissions' recommendations. This problem was the lumping together under student aid of two central but distinct higher education needs: (1) creating and maintaining the capacity to deliver educational services and (2) assuring equal opportunity to benefit from those services. According to the high-tuition position taken by the commissions, these separate needs should be evaluated by the single criterion of equitable access to existing institutions. The issue of maintaining institutional quality or capacity simply was not dealt with in the reports. Frances concluded that the goal of equal opportunity extended beyond education, that the resources needed to achieve it should be funded separately by government, and that existing state revenues should not be diverted from the improvement of institutional capability or capacity by relying on higher tuition since higher tuitions would ration higher educational opportunity. In short, Frances found the commissions did not promise to improve upon low tuition.

Along with other early critics, Larry L. Leslie, then a professor of higher education at Pennsylvania State University, questioned whether the policies advocated by the commissions would improve on the equity of the existing low-tuition system in public higher education and concluded, in effect, that the low-tuition system could be improved not by forcing students from middle-income families to pay higher tuitions but by stabilizing tuitions and increasing need-based grants (Leslie and Johnson in Young 1974).

Criticism of evidence supporting high tuition

The reactions of Bowen, Frances, Leslie, and others cautioned government and public institution officials against hasty encouragement of high tuition. However, criticism of the studies of the late 1960s and early 1970s that encouraged high tuition (i.e., by questioning the social benefits of education, the equity of low tuition financing in higher education, and the individual benefits of higher education) did not become frequent until later in the '70s.

Social benefits. Research in the '60s questioning the social benefits of higher education did not address directly the high- versus low-tuition debate, but did so indirectly by challenging major values, ideas, and assumptions supporting free or low-cost public education at all levels. In 1978, Henry Aaron of the Brookings Institution reviewed the most prominent studies challenging societal benefits. According to Aaron, of the "hundreds of scholars [who] have produced hundreds of studies" on this matter, three studies stand out as "milestones": *Equality of Educational Opportunity*, produced by a committee under the chairmanship of James Coleman to satisfy a mandate in the Civil Rights Act of 1964; *How Effective is Schooling?* by the Rand Corporation; and *Inequality* by Christopher Jencks and a number of colleagues (Aaron 1978, p. 75).

These studies, Aaron concluded, had a great deal in common: research designs were naive, errors were serious, and realistic data were rare. These deficiencies were compounded when pressed through model-dependent cross-sectional analysis. This new and popular technique often focused on data at single points in time fed into models purporting to adjust for conditions over time. In reality, Aaron pointed out, these studies could not track changes, nor could the researchers attribute a great deal of meaning to the patterns that appeared in their data without rather large leaps of inference. However, studies like these were numerous and mutually reinforcing and, therefore, credible. "These flawed studies," Aaron reported, "marched forth like soldiers to battle, slaying the naively held preconceptions about the effectiveness of education, before falling themselves to criticisms and evaluation" (Aaron 1978, p. 93).

Aaron cited an article that pinpointed the central fallacy of the Coleman report and others like it (Luecke and McGinn 1975). These two researchers replicated the method used to produce the Coleman report. As Aaron described the situation:

> Two analysts created a single model of the educational process, including equations that represented annual promotions and public mobility and that incorporated by assumption a positive impact of various educational inputs including teacher characteristics and per pupil expenditures. They subjected a hypothetical population to this educational system; that is, they charted pupils up the educational ladder according to the assumptions embodied in the equations. At a certain point this dynamic process was interrupted and data on a cross-section of students were "collected." The authors then performed the kinds of analyses contained in the Coleman Report; they understate the contribution to educational performance of school inputs, including teachers, and overstate the importance of the students' family background, (1978, p. 81).

Luecke and McGinn concluded that: ". . . our results suggest that studies which find little or no relationship between educational inputs and achievement may be highly misleading. Our findings suggest that the combination of data and statistical technique most often used is unlikely to reveal such relationships even when they exist" (1975).

Equity. Research also has been critical of the studies challenging the equity of public higher education's low-tuition financing system. Nelson (1978) reviewed the studies that seemed to indicate that low tuition functioned as a barrier to access for students from low-income families and as a mechanism for transferring the benefits of tax-supported services from the poor to the rich. She found that those studies (mostly conducted in the late '60s and early '70s) had computational and factual errors that when corrected, reversed the conclusions.

Errors or not, these studies received widespread attention when they were published. One of the more widely read monographs on federal higher education policy during the 1970s, for instance, cited one of these studies:

> Examining the costs and benefits received from public higher education for different income levels in Florida, Windham found that for families with income below $10,000 the benefits of higher education in Florida were negative, and for families above $10,000 they were positive. Thus, he concludes that Florida public higher education costs low-income people more than it benefits them because "the proportion of costs paid relative to the proportion of benefits received increased as the level of family income decreased (Orwig 1971, p. 339).

It was found later that Windham (1970) and the New Jersey Commission (1976) failed to adjust for inflation when comparing data on tax burdens and benefits:

> Windham used 1960 and 1961 data on the fraction of total taxes paid by each income class to distribute the cost of public higher education in Florida in 1967-68. The main problem is that he made no adjustment for inflation (the Consumer Price Index had risen about 12 percent) and, more importantly, for the general growth in real incomes of about 30 percent. Hence, because a smaller fraction of the population fell below any given level of income in 1967-68 than in 1960-61, Windham's use of a 1960-61 tax burden distribution grossly overestimates the 1967-68 higher education costs attributable to low income taxpayers and underestimates the amount carried by the more affluent (Nelson 1978, p. 75).

Another widely cited study, the Hansen and Weisbrod California study of 1976, reached the same conclusion as Windham's but employed a different approach, comparing costs and benefits in terms of the "average" student's family income at various types of institutions. Pechman and, later, Machlis, McGuire, and Nelson criticized the use of the "average student" figure and argued that comparing students from different income groups attending different types of institutions would be more accurate. Using the latter approach, Nelson found that in 1969, student subsidies "exceeded total tax payments most for students in the lowest income groups (even excluding need-based student aid which was available at the time), while taxes exceeded higher education subsidies for students from families earning more than $14,000," (1978, p. 33) reversing some of the Hansen-Weisbrod conclusions. A later study by Hansen and Weisbrod based on enrollment patterns in Wisconsin found that in that state there was no redistribution effect attributable to low tuition financing (Hansen and Weisbrod, 1970).*

---

*For additional information on the equity debate, see also: Hansen and Weisbrod; Hartman; Cohn, Gifford, and Sharkansky; McGuire; and Pechman.

After reviewing the major studies on the equity of financing conducted during the '70s, Nelson concluded, in terms of net benefits (benefits received minus taxes paid), "there is more evidence of a transfer from rich to poor than the reverse," under low tuition systems (p. 35). She also found, however, that the net-benefit approach used in all the equity studies addressed equity only in current, not lifetime or intergenerational, terms and that the method may distort the relationship between higher education policies and other governmental distributions of benefits and tax burdens. Thus, it is at least theoretically possible (but not likely in the case of California, for example) for the net benefit approach to conclude that an equitable system is inequitable or vice versa. She concluded that benefits and tax burdens should be assessed separately.

Nelson also questioned evidence that seemed to show that students enrolled in public colleges and universities generally come from families with higher average incomes than the population at large. The Hansen and Weisbrod study (1969) reached this conclusion by comparing the average incomes of families with students in college with the average incomes of all families. Machlis and McGuire adjusted this methodology by comparing the average incomes of families with students in colleges with the average incomes of families capable of having college-aged children (i.e., people in the 35- to 60-year old age group). Using this comparison the gap was substantially narrowed. McGuire found that, in California, the families of public-college students had average incomes lower than the total 35- to 60-year old age group families. Machlis, in a nationwide study, concluded that freshmen at public institutions came from families with a slightly higher average income than the general population, except among students attending the City University of New York.

High- and low-tuition advocates alike all along have agreed that, in a low-tuition system without need-based student aid, it would be more difficult for a student from a low-income family to afford college than for a student from a middle- or higher-income family to do so. The question of whether targeting aid to low-income students could adjust this imbalance if tuitions were much higher has been the focus of debate. Nelson examined the programmatic aspects of justifying a student-centered financing system in terms of both vertical (i.e., treating unequals in an appropriately unequal manner) and horizontal (treating equals equally) equity.

As for vertical equity:

> Consider first a world that has an unequal distribution of income but is perfect in all other aspects, such as complete information and costless program administration. In this situation, there are no equity grounds for supporting low tuition for everyone, because the simple alternative of relating tuition subsidies universally to income

> (i.e., need-based student aid in place of low tuition) would be better in terms of vertical equity, though no different in terms of horizontal equity.
>
> Since we do not live in this ideal world but must confront incomplete information, costly program administration and other imperfections, low tuition for everyone may actually be a more effective way to achieve equity. For example, with high stated tuitions, many low-income people might be unaware that they would not have to pay this price and would base their attendance decisions on it. For whatever reason it is possible that universal low tuition could be considered more equitable than relying on financial aid alone. Anyone arguing for high tuitions on equity grounds must be convinced that income-based subsidies are more equitable than low tuition in practice as well as theory (Nelson 1978, p. 4).

For horizontal equity:

> Consider another perfect world, this one characterized by a perfectly equal (or at least acceptable) distribution of income continuing from generation to generation. In this case, tuition subsidies would only be justified on efficiency grounds such as: (a) inducing people to consume more higher education than they otherwise would in order to produce externalities such as research, cultural centers, or enlightened voters and citizens; (b) reducing market imperfections—such as risk or the inability to evaluate correctly a person's economic returns to higher education—that cause suboptional levels of higher education consumption; (c) extending payments for a person's own higher education over his whole life and earnings.
>
> In the real world, the magnitude of these social benefits is uncertain, and some even question their existence. Low tuition induces everyone—rich and poor—to consume more higher education than they would in the absence of the subsidies. There certainly is no way to quantify the public benefits of this additional consumption. Moreover, public subsidies of higher education are aimed at furthering both efficiency and equity. A policy that can produce gains in either without reducing the other is most desirable but also rare. Too often, the two goals conflict, requiring a tradeoff between them. Okun has called it "our biggest tradeoff (which) plagues us in dozens of dimensions of social policy. We can't have our cake of market efficiency and share it equally" (Nelson 1978, p. 5).

Individual benefits. Another important question, if pertaining only indirectly to the financing debate, emerged from the work of Richard Freeman (1976). In separate and methodically different studies, Freeman concluded that higher education's individual benefits (i.e., economic returns in the form of higher lifetime incomes) were in steep decline because overproduction had led to a falling demand for educated manpower. Consequently, student demand for higher education would weaken, and the demographically induced enrollment decreases predicted for the 1980s would be more severe than had been projected.

The Freeman conclusions encouraged some people to believe it would be unwise and futile to seek solutions to declining enrollments through student subsidies, either in the form of low tuition or student aid, since any such aid would simply aggravate the oversupply situation. Others held that any steep decline in enrollment would place tuition-dependent private institutions in particular jeopardy. Low tuition, in other words, is too effective in terms of redistributing higher education attendance and opportunity among public and private institutions.

Freeman, who continues to defend his research, has recently come under stiff criticism from fellow economists. David Longanecker summarized some of that criticism:

> Henry Levin (Stanford) in the *Harvard Education Review* points out that Freeman, by including only full-time year round employed workers fails to capture the distinct differences in unemployment rates for high school grads and college grads . . . Finis Welch and James Smith (Rand) suggest that Freeman's selection of examining employment trends between 1969 and 1975 also biases the results because these years represent the peak and trough of employment period for new college graduates. When they added two years on both ends, they found an appreciably smaller decline in returns. They also point out that part of the decline in returns is an artifact resulting from a larger proportion of the overall base being used for comparison also being college educated which spuriously reduces the mean difference. Plus he points out that the comparison does not really compare similar new entrants. Twenty-five to thirty-five year olds may be old timers in the work force rather than new entrants as defined by Freeman. . . . When they correct for the 4-year lag in entry in the labor force for college graduates, they find a much reduced depression in returns. But perhaps the most devastating criticism comes from the recent work of Russ Rumberger (Center for Human Resources—Ohio State), who using CPS [U.S Census Current Population Survey] tapes to replicate Freeman's work, was unable to find the significant declines noted by Freeman (Longanecker 1980).

Rumberger (1980) also pointed out that there has been declining productivity for all young adults, not just the college educated. However, the key argument against Freeman's thesis is "the peak and the trough" nature of the period for his analysis (between 1969 and 1975), which began in relative prosperity and ended in a deep recession. It is generally agreed that the proportion of the work force that is college educated has increased and that college graduates, in some fields and in some years, have been having greater difficulty finding employment meeting their expectations. However, events have demonstrated more than once during this century that the economic value of the college degree cannot be invulnerable to weakness in the economy.

Price and enrollment. Evidence regarding the relationship between the cost of college attendance and enrollment is tenuous at best. During the '60s and '70s economists attempted, through the use of econometric techniques, to estimate the relationship between tuition and enrollment and the effect, if any, of tuition reductions at public colleges on private college enrollments. The econometricians did not attempt, however, to estimate the relationship between enrollment and the various forms of student aid, and so policy makers have had little to guide their discussions on this topic.

Hyde explains the policy analysis problem:

> Much of the apparent lack of progress [in specifying the magnitude of impact on enrollment variables such as tuition or student aid] stems from the fact that studies are designed for different purposes and use different data and different methodologies. Variety in research design, while understandable, vastly complicates the effort to determine from study to study improvements in accuracy of parameter estimates regarding the effect of variables, for example tuition and aid, on access and choice, issues which have become particularly important recently. From the policymakers' point of view, results produced by research in the field are often virtually inaccessible on two counts. First, some methodologies produce results that are interpretable only within the study. The values have no meaning outside the study. Second, because of differences in research design—specifically the specification of variables in the model—estimates from study to study of apparently similar variables often vary widely so that the policymaker is hard pressed to reconcile the estimates or to choose among them (1977, p. 1).

In a review of studies relating to the effect of tuition rates on college enrollments, McPherson (1978) illustrated a common misunderstanding among such studies. As shown in table 1, he derived from each of nine studies a price response coefficient indicative of the enrollment rate increase that could be expected from a $100 decrease in tuition. These coefficients, however, referred to the increase in overall college participation rates among 18- to 24-year-olds. McPherson pointed out, however, that roughly only one-third of all 18- to 24-year-olds actually attend college and that an increase of 1 percent in the overall participation rate would equal a 3 percent increase in institutional enrollments. Correcting for this fact produces an estimated increase in college enrollments three times as high as the price response coefficients.

More recent studies support the higher estimated impact figures in McPherson's analysis and provide additional detail. For example, Carlson used the $100 tuition reduction measure in 1975 to estimate

Table 1: Estimated effects on enrollment of $100 tuition reduction

Study	Year of study	Year of data	Price of response coefficient	Estimated effects on enrollment
Campbell and Seigel	1967	1919-64	.20	.60
Hoenack	1967	1965	.71	2.13
Radner and Miller	1970	1966	.05	.15
Corazzini, et al.	1972	1963	.62	1.86
Kohn, Manski, and Mundel	1973	1966	.92	2.76
Barnes	1973	1970	1.53	4.59
Hopkins	1974	1963	.75	2.25
Hoenack and Weiler	1976	1972	1.46	4.38
Bishop	1977	1963	.90	2.70

Notes: Tuition reductions are adjusted to 1974 dollars. The effect of a tuition decrease is estimated to be three times the price response coefficient. This is because the price response coefficient applies to the college participation of all 18- to 24-year-olds. Since only an estimated one-third of 18- to 24-year-olds attend college, a 1 percent increase in the 18- to 24-year-old college participation rate would equal a 3 percent increase in the enrollment rate.

Developed from information in Michael S. McPherson, "The Demand for Private Higher Education," in *Public Policy and Private Higher Education*, edited by David G. Breneman, Chester E. Finn, and Susan C. Nelson (Washington, D.C., The Brookings Institution, 1978).

the effects of tuition on public four-year college attendance by family income. His estimated enrollment responses ranged from an increase in college-going of 1.2 percent for students from the highest income quartile to an increase of 7.5 percent for students from the lowest (Carlson 1974 and 1975). Barnes, using a model-based analysis, also concluded that students from high-income families would be considerably less sensitive to tuition levels (3.5 percent) than students from low-income families (7.6 percent) (McPherson in Breneman and Finn 1978).

During the past two decades, there has been only one experiment pertaining to the relationship between tuition and enrollment. In Wisconsin, tuitions at two of 14 public two-year liberal arts commuter centers were reduced more than $300 to determine the effect on enrollment. Expressed in terms of a per-$100 tuition decrease (in 1974 dollars), enrollments during the initial year increased 4.8 percent at a rurally located experimental center and 12.2 percent at a center in a rapidly growing area. There was little, if any, impact on enrollments at nearby public and private institutions. Comparable enrollment decreases occurred in 1976 when tuitions at the experimental centers were raised to the levels of the 12 non-experimental centers (Stampen 1974).

Public-private impacts. Another set of econometric studies has focused on the effect on private colleges of lowered public college tuition. McPherson has pointed out that disagreements among these studies are even more varied than those among the studies focusing on the general response of enrollment to price, but that there is basic agreement that "reduced tuition rates at public institutions will raise public enrollment, but that the rise will come in large part at the expense of private enrollment" (McPherson in Breneman and Finn 1978, p. 184). Similarly, the studies conclude that reductions in private institution tuitions will draw students from public colleges.

King (1977), in a study explaining recent enrollment patterns in Pennsylvania, concluded differently:

> Tuition increases in private and private state aided segments result in declining enrollments in their respective enrollment functions, but this relationship is not evident in the total enrollment function . . . those who do not enroll in private or private state aided schools due to tuition increases, do enroll somewhere, presumably in state-owned colleges and universities or in the community colleges. Furthermore, those who do not enroll at state-owned and community colleges when tuition is increased, apparently do not enroll in any category of Pennsylvania higher education.

Of course, tuition level is only one of several factors that influences the choice of college. For example, Speis (1978) found that students attending some of the most expensive and prestigious private colleges were largely insensitive to price. These institutions usually attract a high-income clientele, and generous student aid often is available for very promising students from low-income families. In a demographic study of enrollment behavior in Minnesota, Mortensen (1975) found distinct clienteles among the different kinds of public and private institutions in the state, and it is common knowledge that even different departments and programs within a single institution draw from different clienteles.

The Bowen-Minter studies of the financial condition of private colleges and universities have alluded to the early '70s when there were widespread predictions that many private colleges would close. They suggest that this fate has been averted, at least in part, because of transfers from low-tuition community colleges (Bowen and Minter 1975). Perhaps the most plausible explanation of this development is that public higher education provides low-risk entry for many who are at first uncertain about going to college but who later decide that their aspirations will be best served at other colleges.

Given these apparent contradictions in the evidence, it is difficult to draw any firm conclusions regarding the extent to which public-college tuitions affect private-college enrollments. There is evidence, however, that policy makers in some states have taken seriously the possibility that the lower tuition at public institutions does draw students from the private colleges. They have made efforts to narrow the tuition gap through institutional or student aid at private colleges, at least for students from low-income families. For example, in 1978, McPherson observed that among the more affluent private colleges, "The private college is as cheap or cheaper than the public college for students with family incomes up to something like $19,000 a year" (McPherson in Breneman and Finn 1978, p. 169). In Florida, for example, state residents attending private institutions in the state receive state grants, not based on need, of $750 per academic year. In addition, those from low-income families are eligible for institutional scholarships and need-based state and federal aid. The Florida program appears to be particularly beneficial to the smaller private liberals arts colleges because a student from a family earning up to roughly $25,000 might find it as cheap or cheaper to attend a small in-state private institution than a public four-year university. North Carolina has much the same sort of program.

Relative effectiveness: low tuition and/or student aid. There have not been many studies comparing the effectiveness of low tuition with that of various other forms of student aid or in combination with other forms. As mentioned earlier, econometricians have attempted to estimate the enrollment-inducing effect of tuition reduction, but have not addressed the possible enrollment-inducing effect of grants, work/study, or loans, separately or in conjunction with low tuition. However, a few studies based on student surveys have provided comparisons of low tuition with the various forms of student aid. Hyde summarizes existing impressions:

> The first is that a large proportion of aid recipeints say they would not attend [college] without aid . . . Second, the effect on enrollment of receiving aid is less than the effect of a change in tuition. On average, a $100 change in tuition results in about a one percentage point change in attendance rate [equal to about a three percent change in the enrollment rate]. Weathersby (1975, p. 605) using data from Leslie and Fife (1974) calculates that a $100 increase in state grants to students will increase the enrollment ratio by 0.6 percentage points. Carlson finds that a $100 grant through the federal Supplemental Education Opportunity Grant (SEOG) program increases the enrollment rate but just less than one percentage point for students from families with low incomes and less than 0.1 percentage points for students from middle income families (Carlson 1974, p. 25). . . . An analysis of several different state and federal aid programs also shows that, as with tuition, (a) the impact of aid on enrollments lessens as income rises, (b) the relative effectiveness of aid is greater for lower income than for higher income students, and (c) that aid is more effective at private institutions than at public institutions (Carlson 1974, 1975). . . . The third finding is that grants are more effective than either loans or work-study (Carlson 1975, p. 62) (1977, p. 37).

Thus, available evidence suggests that, even with a low elasticity, tuition has a more powerful effect on enrollment than any other form of aid, especially for low-income students. Some plausible explanations have been advanced for these impressions, but they are complicated by many environmental factors, such as changes in levels of funding for student aid, availability of information, and government-institution relationships. There seem to be few, if any, detailed prescriptions for changing the overall financing system so that student behavior at public colleges would be less sensitive to low tuition and more sensitive to grants or loans.

Low tuition elasticity: implications. Perhaps the most common cause of confusion about the relationship between tuition and enrollment lies in the representation of tuition as the total price to the student of college attendance. McPherson again observes:

> It seems fair to call a price response of this order of magnitude (a $100 cut in tuition would lead to about a 1 percentage point increase in the enrollment rate—or a 3 percent increase in enrollment) "small." Cutting tuition in half, according to those estimates,

41

> would only raise enrollment by about 15 percent. That the rate of price response should be fairly low (though not negligible) makes intuitive sense for a couple of reasons. First, tuition is only a fraction of the total cost facing a student—less than half when room and board is included, even less if foregone earnings are counted. Thus cutting tuition in half means perhaps a 20 percent drop in cost-or-less and seen in that light, the effect on enrollment seems quite reasonable (Breneman and Finn 1978, p. 181).

To the student, tuition is the most visible indicator of price. Even so, when tuition is expressed in terms of tuition elasticities (*i.e.*, the percent change in enrollment divided by the percent change in tuition), the result is a low number partially because, as McPherson points out, tuition is, after all, only a fraction of the total price. When the identical calculations are applied to both total cost of attendance and to tuition standing alone, the fundamental importance of price becomes clearer.

Hypothetical State University

	Enrollment	*Tuition*	*Total Cost of Attendance*
Year 1	5,000	$800	$3,300
Year 2	5,150	700	3,200
Percent Change	3.0	12.5	3.0

Tuition Elasticity 3.0 ÷ 12.5 = 0.2 (low)
Total Cost Elasticity 3.0 ÷ 3.0 = 1.0 (high)

Expressed in terms of total cost of attendance, there is a 1.0 percent increase in enrollment for every 1.0 percent decrease in cost, but, in terms of tuition alone, there is only a 0.2 percent increase in enrollment for every 1.0 percent decrease in cost. This suggests that students are quite sensitive to price and that the impact of an increase in tuition should be considered together with other costs of attendance.

Hyde explained the common view concerning low tuition elasticity as it relates to institutional financing in this way:

> The consequence of a low tuition elasticity, from a policy perspective, "works against" public policy efforts to increase enrollment. A greater proportional decrease in tuition is required to generate a given proportional increase in enrollment. It does work to the advantage of institutions when they may have to raise the tuition level

> to meet rising costs. A low elasticity assures them that an increase in tuition will not result in a drop in revenue even if some students decide to leave the institution. . . . At the point at which elasticity exceeds one, an institution will lose revenue (1978, p. 5).

Questions can be raised concerning two points made in this statement: (1) Can it be assumed that a low tuition elasticity index works against efforts to increase enrollments if the elasticities of other forms of student assistance are lower than that of tuition, which, according to available evidence, seems to be the case, and (2) does a low tuition elasticity ensure that an increase in tuition will not result in a drop in enrollment sufficient to offset the increase in institutional income expected from the higher tuition?

With respect to the first point, if students, especially from low-income families, are more responsive to low tuition than to any form of student aid, it would seem erroneous to argue that a low tuition elasticity works against enrollment, since nothing works for it more. Some advocates of higher tuition, however, have argued that targeting student aid to students from low-income families would lead to a more equitable family income distribution among students at an institution. Also, they usually advocate that tuitions be raised for students except those from low-income families. However, these kinds of proposals usually do not specify whether the desired effect is to increase the enrollment of low-income students at the expense of other students, to "improve" efficiency, or to maintain access for everyone while improving it for students from low-income families. It seems difficult to accomplish the latter without combining low tuition and student aid.

As for the second question, public higher education enrollments almost always are matched with state appropriations on a per student basis, but in a majority of states there is no formal relationship between tuition and appropriation levels. If, consequently, a public institution raises its tuition there is no guarantee that (a) the institution would be able to apply revenues from higher tuition to its programs; (b) the state would not cut the institutional appropriations (in many states tuition revenues revert to the state general fund and appropriations are made on the basis of separately determined program needs); or (c) even if institutional appropriations are maintained and tuitions are raised but tuition elasticity is underestimated, per student revenue levels would be maintained.

In summary, little seems to have been established firmly by studies pertaining to social and individual benefits, equity, and student response to tuition or student aid, except that research critical of the rationales upon which low-tuition financing are based have been fundamentally questioned by subsequent research.

Common faults of many studies include the use of complex methodologies before they were fully understood by their users and the frequent lack of detailed knowledge of state and institutional operating policies and practices or their supportive environments. In short, it has proved difficult to criticize public higher education's low-tuition system or to develop realistic alternatives for it.

Low Tuition, Student Aid, and Work: An Evaluative Sketch

As discussed in chapter 2, those economists who advocated student aid as a substitute for low tuition on equity and efficiency grounds were, for the most part, supported by statistical evidence that has since been either challenged or clarified to the point where new evidence seems required to support their conclusions. However, the debate continues, at least partially because many questions pertinent to the college-financing issue remain unanswered. For example, there has been little systematic research regarding the equity and efficiency of low tuition, and there has been little systematic monitoring of the consequences of substituting student aid for low tuition where such has occurred.

This chapter discusses two studies that at least indirectly shed light on the substitution issue. In an investigation of the enrollment behavior of traditional college-age and adult students, Bishop and Van Dyk (1975) and Bishop (1977) found statistical evidence that low tuition has effectively stimulated college attendance among students from low-income families. Lavin, Alba, and Silberstein (1979 and 1980) present data drawn from the recent experiences of the City University of New York suggesting that, in terms of improved equity and efficiency, the partial substitution of student aid for free tuition at CUNY produced questionable benefits for both students and taxpayers.

The chapter also includes a discussion of current problems associated with increasing the role of nongovernmental loans in college financing, an option favored by many economists. Another discussion concerns the feasibility of expanding student employment as a means of supporting students and, perhaps, even institutions.

These two topics are relevant in any evaluation of a key point in the debate involving the economists' search for a means of financing higher education that is less dependent on public subsidy. In this regard, recent evidence suggests that the cost to governments associated with making loans appealing to students and private lenders is very high and may not compare favorably with the costs and benefits of direct government support for students and/or institutions. Also, although more research is needed on the issue, the historic unpredictability of privately funded student-employment opportunities cautions against placing greater reliance on student employment as a source of nongovernmental support for college access.

Low tuition: statistical evidence of effectiveness

A 1977 study presented evidence supporting the historically strong relationship between tuition levels and collegiate attendance (Bishop 1977). The study, based on a multiple cross-sectional analysis fed by Project-Talent data extending over several years during the 1960s, avoided most of the weaknesses associated with cross-sectional analysis that Aaron had noted. Data were both detailed and longitudinal, and analysis was not dependent on assumption-laden models to simulate changes over time. Instead, Bishop's approach, like King's cited earlier, tested various statistical techniques against actual student behavior before developing conclusions. Further, Bishop's findings seem plausible in light of observations in the field and other evidence. However, the significance of his study was somewhat less than it might have been because his analysis covered a period preceding the expansion of federal and state student aid in the 1970s. Nonetheless, it serves as an important statistical description of how low tuition has advanced equitable access. Six of his findings seem particularly important:

1. "Tuition, high admissions standards, foregone earnings and travel and room and board costs are found to have significant negative effects on attendance. The per dollar effect of tuition is larger than any other costs" (Bishop 1977, p. 286).

2. "Nationwide, if tuition at low-cost colleges had been set at a level covering the full cost of instruction, the rate of college attendance would have been 19 percent rather than 40 percent in 1961" (p. 294). Furthermore, "if typical cities in Indiana and New Jersey had adopted California's package of higher education programs . . . the rates [of attendance] in poverty families would have risen by 13 to 20 percentage points or [by] about 70 to 100 percent" (p. 299).

3. After tuition, the factor with the next greatest negative effect on enrollments is admissions standards. Many public institutions in the 1950s and 1960s had open or liberal admission policies. Presumably, however, if public colleges had imposed higher admissions standards in addition to charging full-cost tuitions, the overall attendance rate would have been less than 19 percent.

4. In terms of family income, Bishop's findings were similar to Carlson's (1974). But when Bishop factored in student academic ability with family income, he found the highest tuition elasticities in the lower-income/middle-ability group and the lowest elasticities were found in the lower-income/highest-ability and lower-income/lowest-ability groups. Some have reasoned that low elasticities for low-income students reflect a measure of self-selection; that

is, for young people who have not done well in school and who believe there is little chance of succeeding in college, neither low tuition nor student aid will greatly affect college participation rates. However, students in the next higher quartile in the 1960s knew they at least had a chance of succeeding in college and, therefore, were quite sensitive to price.

5. "If in 1961 a million dollars had been spent lowering the general level of tuition for new high school graduates and providing staff to teach them, 436 new full-time students would have been produced. A million dollars made available to poverty students of all abilities would have produced 710 extra students in 1961" (p. 295). With respect to this last point, it is important to note that Bishop compared the effectiveness of grants for low-income students with reductions in tuition, not with simultaneous increases in student aid and tuitions. His conclusion, then, suggests that student aid is most effective when made available as a supplement to low tuition, a belief long held by low-tuition advocates.

6. In a separate study, Bishop and Van Dyk (1975) concluded that part-time students were two or three times as sensitive to tuition as full-time students (pp. 53-54). This conclusion has obvious implications for "later-in-life" learning or urban-centered education, since enrollment statistics show that part-time students tend to be older, to have family responsibilities, or to come from low-income groups in urban areas.

Bishop's results confirm many of the views held by the low-tuition advocates in the '60s and early '70s. Even though tuition is, actually, a relatively small component of the total "price" of attending a public institution of higher education, low-income students respond more to levels of tuition than to any other element of cost. Perhaps this is true because tuition requires a lump-sum investment of cash more immediately visible and demanding than outlays for individual sustenance or the sacrifice of foregone earnings.

The extent of access also plays an important role, particularly for low-income/middle-ability students. However, as Bishop points out, student aid would have added substantially to the effectiveness of low tuition. Finally, and perhaps most pertinent to the immediate future, low tuition is particularly important to the increasing number of older and working students attending college part time who are not often eligible for student aid.

Substituting for free tuition: the CUNY case

Bishop's findings to some extent also seem reflected in recent developments at the City University of New York (CUNY), which during the 1970s experienced major changes in tuition and admissions policies.

CUNY began the '70s as a large, urban commuter institution with free tuition (a fee of about $100 was charged). According to Machlis (1973), the average family income of CUNY students was lower than the average family income in the city. In fact, it was the lowest in the nation among student bodies.

With their policies of low or no tuition and open access, many public colleges across the nation enrolled increasing numbers of European immigrants and their offspring in the last decades of the 19th century and the first of the 20th. According to Lavin, Alba, and Silberstein (1979), this pattern also applied to the City College of New York, especially beginning in the last decade of the 19th century in the assimilation of European Jews and Catholics. By the '20s and '30s, the institution had achieved a reputation as the "proletarian Harvard" and as an "open door to the middle class." Between World War II and 1960, the open door was partially closed. Tuition remained free and all high-school graduates were eligible to attend the community colleges, but access to the senior (four-year) colleges was restricted to those ranking in the top half of their high school graduating classes.

In 1969, groups representing a new wave of immigrants, mostly southern blacks and Hispanics, confronted both the city government and CUNY demanding that open access be extended to the senior colleges. In 1970, the city and CUNY responded by reestablishing universal open admissions. That year, as noted earlier, freshman enrollments increased by 75 percent or by 15,000 students.

Some of the best known social scientists of the day did not agree with these emergent groups about the value to them of open access. Lavin, Alba, and Silberstein explained:

> Paradoxically, the open-admission policy began at CUNY at the same time that doubts were growing about the ability of educational systems to remedy inequality. The Coleman report, published in 1966, had begun a decade of debate over the role of education in American society. The immediate doubts created by the report and other works—most notably Christopher Jenck's *Inequality*—concerned the effects of schooling. The Coleman report concluded that the characteristics of the schools students attended and presumably, the quality of education they received in them seemed remarkably ineffective in accounting for academic success. In particular differences between races in test results could not be explained by the characteristics of schools. The analysis of Jencks and his coworkers not only supported these conclusions, but also indicated that school characteristics and amount of education explain little of the subsequent inequalities of occupational status or income. Responding in part to the findings of Coleman and Jencks, a number of social theorists began to examine the functions of the educational system

> from a critical perspective. Perhaps the most prominent of these critics were Samuel Bowles and Herbert Gintis, whose *Schooling in Capitalist America* emphasized education's functions in reinforcing the existing system of social stratification. In their view education is closely harnessed to American capitalism and serves the needs of its hierarchal division of labor (1979, p. 55).

Thus, it was suggested that open admissions would not alleviate inequality, but would strengthen it "by providing the illusion of equal opportunity to those destined for the lowest level of white collar jobs" (p. 86).

The findings of the CUNY studies were that, as a result of open admissions, minority-group participation increased at all levels of the system, the proportion of students dropping out decreased, and graduation rates increased. However, even though enrollments from non-minority groups did increase, not all evidence of former college-going patterns disappeared. Minority enrollments still skewed toward the community-college level, and students who had enrolled before 1970 continued to skew toward the senior colleges. The authors attributed some of this to unequal starting positions for minority students, tracking in the elementary and secondary schools, advice of guidance counsellors, and the occupational aspirations of the minority students themselves:

> The paradox of open admissions is one that it probably shares with most other ameliorative reforms. While benefits do flow to those intended to receive them, they also flow unintentionally to others, and often the latter, possessing more resources than the former, are better able to take advantage of the new opportunities. Without question every ethnic group benefited from open admissions. The benefits to Blacks and Hispanics were substantial, and CUNY changed appreciably as a result. But the benefits to whites, Jews and Catholics were even more substantial in many ways (Lavin, Alba, and Silberstein 1979, p. 86).

In 1976, as a result of New York City's fiscal crisis and other factors, tuitions of $750 for freshmen and sophomores and $700 for juniors and seniors were adopted by CUNY. The abolition of free tuition was made possible, in part at least, by the increased availability of student-aid funds, according to some New York officials. Theodore Hollander, deputy commissioner of education for New York at the time, explained that if tuition were made necessary by the fiscal crisis, it was made feasible by New York's large state student-aid program and the rapidly expanding federal Basic Educational Opportunity Grant Program. These programs together made it politically feasible to shift part of the burden for maintaining access to the federal and state student aid programs (Smith and Kent, 1977).

Ewald Nyquist, New York's commissioner of education, also suggested that the availability of student aid would result in a relatively painless transition to the imposition of tuition: "Commissioner Nyquist opened his call for tuition at the university with the argument that such charges would be more than offset by state and federal student aid money—money that is only available to students at tuition charging institutions" (*New York Times*, 1975).

The authors also report that in the heat of the CUNY debate over whether to retain open access and/or free tuition, the minority groups never supported the substitution of student aid for free tuition. Some, for instance, were suspicious of changes in policies that had prevailed for earlier groups. They asked, "When the tuition has been free for earlier generations, why should it be imposed just as the minority presence at CUNY became large?" (Lavin, Alba, and Silberstein 1980, p. 11). To these groups free tuition might have meant access without any questions, but student assistance had to be applied for, as did welfare assistance. Free tuition conferred a right, student assistance a charity.

The imposition of tuition triggered decreases in enrollments within all groups, including the minorities. Between 1975 and 1976 freshman enrollments declined from 40,368 to 29,283. In 1977 and 1978 freshman enrollments rebounded somewhat to 33,821 and 32,300, respectively, but in no year did they approach the pre-tuition levels. In addition, Lavin, Alba, and Silberstein (1980) report that, "while the enrollment decline occurred among all groups, it was proportionately greater among whites than among minority students. . . . As a result of the greater fall-off among whites, the proportion of minority freshmen increased" (p. 11).

Many of those not enrolling at CUNY that year simply did not go to college:

> Definitive evidence on the number who went elsewhere is lacking. While CUNY's freshmen enrollment declined by about 11,000 between 1975 and 1976, the number of graduates of New York City high schools who enrolled in the State University of New York and in independent colleges in the state increased by only about 2,000. There were only very small percentage increases in enrollments in out-of-state colleges. It appears that somewhat less than half of the 1976 graduates who might have attended CUNY enrolled elsewhere the following fall. Others may have enrolled in college the following fall (p. 33).

In attempting to explain the changes, Lavin, Alba, and Silberstein cite the possibility of prejudice, pointing to the institution's earlier experience when attendance of "old stock" New Yorkers declined following the enrollment in large numbers of the children of Jewish and Catholic immigrants. However, declining enrollments among high-ability students did not begin until free tuition was abolished. Before that, the trend had been in the opposite direction. Furthermore, the effective cut-off point for receiving financial aid under New York's Tuition Assistance Program and under the Federal Basic Educational Opportunity Grant (BEOG) was a family income slightly above $15,000. Thus, many students who could not be considered affluent were perhaps painfully made aware that they were not eligible for student assistance, as were all students attending college less than half time.

Whether student aid is more effective than low or no tuition in terms of enabling students from low-income families to attend college varies somewhat among full- or part-time students and among those who live at or away from home. However, the fact is that students attended CUNY, a commuter institution, in greater numbers before tuition was established than after raises some questions. It is perhaps surprising that about the same percentage, approximately 15 percent, of dependent youths from families in the lowest family-income quartile—families headed for the most part by semiskilled, unskilled, or unemployed workers (Rose 1979)—attended American colleges and universities in 1972, before the massive expansion of federal student aid, and in 1978, after the aid programs were fully operative.*

The other question frequently raised by economists is that of efficiency. In the CUNY case, local government reduced its effort, thus requiring the federal and state governments to expand theirs. In effect, the burden of support was partially transferred from one government to two others. The New York City taxpayer continued to subsidize instruction at CUNY, at a reduced level, through city taxes and to subsidize student aid through state and federal taxes, although admittedly the state and federal support base involved more than city residents. It would be interesting to investigate if the increased cost of student aid fell short of, equaled, or exceeded savings resulting from the reduced instructional subsidies and increased tuition revenue. If the first of these possibilities proved true, the enrollment impact would suggest that the amount of student aid needed to displace free tuition was underestimated. If either of the last two proved true, it would seem clear that there was little, if any, improvement in efficiency gained by increased reliance on student aid. "Efficiency" may have seemed to improve only because large numbers of students left CUNY. Certainly, however, the city taxpayer-parent with an income above the student-aid cutoff level came up short. In addition to tuition payments, this parent, through taxes, continued to subsidize instruction and student aid.

---

*Based on a comparison of non-married students enrolled in college by family income group in 1972 and 1978. U.S. Department of Commerce, Current Population Reports Series P. 20, No. 260 and 346. (1972 median family income = $11,133; percent in college under $3,000, 14.3%; under $10,000, 25%; over $10,000, 46.8%. 1978 median family income = $17,640; percent under $5,000, 15.5%; under $15,000, 24.3%; over $15,000, 43.7%.

Loans and work programs: the search for non-public funding

At this point, it might be instructive to discuss briefly two mechanisms for increasing the non-public investment in higher education, since this was one of the key objectives cited by the economists for moving toward increased reliance on student aid. Loans have received a great deal of attention by economists and others interested in drawing increased funding from nongovernmental sources. Work programs, although another possibility, have received little attention by the economists.

Loans. The attainment of social goals involving higher education, such as increasing attendance by students from low-income families, has placed growing demands for tax support. Thus, as higher education has expanded into a massive enterprise, there is always the fear that tax support cannot keep pace. The solution frequently suggested is to raise the tuition but reduce the impact of the increase on students by improving access to credit. This, in a sense, would establish investment in human resources as a priority similar to investment in capital goods. In short, economists working to perfect loans would substitute credit for government support, an underlying theme in most proposals to establish national loan banks.

However, the problem with the loan approach, particularly in a time of high inflation, is that students and their families are reluctant to borrow and banks are reluctant to lend unless the subsidies are so lucrative that the cost to government of providing the loans approaches that of awarding grants.

As the system now functions, needy students may borrow from the National Direct Student Loan program (NDSL) and do not pay interest on their loans until after leaving college. Then they pay only 3 percent. Under the Guaranteed Student Loan program (GSL), loans are provided by private banks instead of the government, there are no family income limits, and interest after leaving college is set at 7 percent, substantially below the current commercial rate.

The GSL program also provides subsidies for banks and private investors. Briefly, the process works as follows: A bank sets aside an amount it is willing to lend students under the terms of the program. The bank immediately sells the loans to the Student Loan Marketing Association (Sallie Mae), a private corporation established and subsidized by the federal government, at a rate somewhere between the commercial rate and 7 percent. Sallie Mae then sells the paper it has purchased—accompanied by a guarantee against future default on repayment—in the commercial market, but at a discount, since the prevailing loan rate is higher than the return on the paper.

The process is clearly expensive. In 1974, before the recent surge in the inflation rate, Johnstone (in Rice 1977), after factoring in the cost of defaulted loans, estimated that it cost the federal government 54 cents to lend a dollar through the NDSL program. Similar estimates exist for the GSL program. Between 1978 and 1980, when family-income limitations on GSL borrowing were eliminated, the volume of GSL loans nearly doubled. In 1980, budget requests for interest subsidies to banks reached $831 million out of a total request for all federal postsecondary-education loans of $1.9 billion, an amount many perceive as threatening to appropriations for need-based grants. (See table 2, chapter 4). As noted above, Carlson (1974) estimated that student enrollments are less than half as sensitive to loans as to low tuition or grants. Loans, therefore, appear to be expensive in relationship to their effectiveness and, under existing circumstances of limited efficiency as a substitute for low tuition or grants.

Work programs. The work-program approach, most recently advocated as a curricular reform, is an extension of a historic means of financing access to higher education. The tradition of students working their way through college must go back to the founding of universities in the Middle Ages. This tradition received government sanction in the 1930s with the depression-spawned National Youth Administration program and received academic sanctions in the land-grant university tradition and in the long history of cooperative education pioneered by private and public institutions such as Antioch, Cincinnati, Akron, and Northwestern. In recent years, the idea of combining work and study on a massive scale has been increasingly popular among the state colleges and universities in the Midwest.

According to a 1974 survey of 8,000 public university students by the Illinois Economic and Fiscal Commission, 54 percent of the average undergraduate's college expenses were met by summer and school-year employment (Keene, Adams, and King 1975). Only 23 percent were met by parental assistance, 16 percent by state and federal student grants, and 7 percent by loans. Even so, with the exception of the federal College Work/Study program, relatively little attention has been given recently to work as a form of student financial aid. Perhaps one reason for its low visibility in the debates over college financing is that proponents of the concept have not been economists. Instead work-program advocates have looked to other social sciences such as anthropology, sociology, and psychology for the guiding principles.

Keene points out that "scholars who study mankind, his social instrumentalities, and his culture, recognize the central importance of work. . . . This is true because work . . . must be learned in order for the social system to survive, [a fact even for] the complex and sophisticated cultures and nations of today. Because of this, . . . work is educational" (Keene, Adams, and King 1975, p. 10).

From this rationale, Keene draws implications for a work role both in financing education and in education to achieve societal goals:

> Work is pervasive. But in our affluent society, it is easy for young people to be pampered, and for them to develop difficult handicaps, psychologically and otherwise, because of the lack of exposure to good work experience. This brings us then to . . . the recognition of the importance of student work in the context of higher education. . . . In their recognition of the value of providing access to higher education to all people, the federal government, the states, and the institutions should . . . [recognize that] work should be the fundamental form of financial support. It is true that gifts and loans can also provide sound educational experiences. But, because these artifacts are superficial rather than basic characteristics of our society (they do not appear in all social systems), it is a bit more difficult and a bit more expensive. . . . [Further] the haphazard provision of gift aid, unaccompanied by appropriate provisions for making it educational and without the provision of good work experiences, to minority people can have traumatic results, engendering psychological and attitudinal handicaps, that further impede the individual's progress and social usefulness. This is especially true in view of certain unintended, and at this time uncorrected, consequences of our humane but impersonal massive programs of social welfare (1975, p. 13).

The work-program advocates see several opportunities for implementing work and study on a massive scale. The principal obstacle is the creation of enough jobs that are productive and meaningful and, therefore, capable of attracting private and government investment. Despite this obstacle, a remarkably large number of students help finance their college careers with work. Adams reports that between 72 and 90 percent of the students in her survey held summer jobs and between 42 and 50 percent of them worked during the school year. Adams states, however, that her data suggests an income-level skewing of student employment rates that works against employment opportunities for the neediest students. Among students who sought summer employment, 12 percent of those from families with annual incomes of less than $5,000 were unsuccessful, but the unemployment rate for students from families earning over $20,000 was only 5 percent. School-year unemployment rates ranged from 32 percent for the lowest income group to 2 percent for the highest. These data pertain, Adams pointed out, despite the fact that the federal College Work/Study program focuses on students from low-income families. She suggests this problem results, in part at least, from excessive regulation in the federal program.

In Illinois, employment opportunities also varied by institutional location. At four institutions in the Chicago area, an average of 71 percent of the students held jobs during the school year, but only 35 percent of those enrolled in rural-area institutions did so. Adams also reported school-year employment at all Illinois institutions rose from 29 percent in the freshman year to 61 percent in the senior year, and the unemployment rate declined from 35 to 13 percent over that period.

These statistics cover all employment and do not address the question of "meaningfulness" or relation to academic field. Other writers such as Ramsey. Jennetten, Mace, Frank Adams and Moore (in Keene, Adams, and King 1975), however, suggest that many jobs can be made instructive through proper supervision and evaluation. Even so, the history of cooperative education cautions against overdependence on work as a means of financing higher education or of lessening dependence on low tuition and student aid. For example, the Great Depression, World War II, and the temporary glut of engineers in the middle 1960s disrupted many cooperative education programs and demonstrated the vulnerability of work programs to unstable economic conditions.

To date, the work-program movement has been primarily concerned with integrating work into the college curriculum so that those emerging from college have good work experiences and are better equipped to become self-reliant and productive citizens. However, little seems to have been written on work as a means of financing higher education, at least not in the context of academic debate over college financing. In fact, the advocates of work programs, especially those from public colleges, view the programs as a supplement to low tuition and as a substitute, insofar as possible, for other forms of student assistance. The college-financing aspects of student work programs merit further research, particularly with regard to the feasibility of attracting increased funding and of improving opportunities for students from disadvantaged backgrounds. In addition, attention should be given to collegiate work programs in relation to national service programs.

Decisions, Trends, and New Issues

Thus far in this report, attention has been directed at the public higher education financing issue as debated among economists and other academics. Attention now is turned to decisions made during the 1970s, some of the trends that were influenced by those decisions, and some of the new issues that were generated by the efforts to assimilate federal student aid into the historic pattern of higher education financing.

Decisions, intentions, and trends at the federal level

Two highly informative books, *Congress and the Colleges* (Gladieux and Wolanin 1976) and *Scholars, Dollars and Bureaucrats* (Finn 1978), describe the evolution of federal higher education legislation during the 1970s. No attempt will be made here to repeat these accounts, except to refer to them when making a few observations.

In terms of higher education, the main event at the federal level during the 1960s and 1970s was a heated debate in Congress over whether federal support for higher education should flow through students, the institutions, or both. With the passage of the Higher Education Amendments of 1972 to the Higher Education Act of 1965, the debate seemed to be resolved in favor of student aid alone. This decision reflected increased distrust of institutions and a firm retreat from investment in them. Even so, student aid was funded generously at a time characterized by skepticism about the value of higher education itself. Gladieux and Wolanin (1976) described the paradox:

> On May 25, 1972, CBS television broadcast an hour-long special entitled, "Higher Education: Who Needs It?" One month later the Educational Amendments of 1972 were signed into law. . . . Why, in mid-1972, did Congress pass bold legislation to aid students and colleges in new ways? Part of the explanation lies in the simple mechanics of policymaking. The basic statutes authorizing federal education programs generally run for a fixed number of years and thus must be reviewed periodically. In 1971-72 it was higher education's turn . . . a new debate mounted—not over the principle of federal support, but rather over its purpose and form (p. 35).

The congressional debate over "purpose and form" largely ignored the question of who needs college by assuming that more people did, especially those from low-income families. The question of "why" was not really addressed. Senator Claiborne Pell, principal author of the BEOG program, stated it, "The philosophic underpinning of this bill whose centerpiece was the Basic Educational Opportunity Grant (BEOG) program was the profound belief that every individual in the country should have *the right* to a floor of support for his postsecondary education (1971, p. 37864). At the federal level, this "right" was to be extended through grants to students rather than by institutional subsidies and loans. In the states these "citizens rights" had been met for nearly a century through low tuition and liberal access for students attending public colleges and universities. The federal response to the same principle not only concentrated the "support" on need-based grants for students but also made eligible for the grants students attending private and proprietary institutions, as well as public institutions. Little attention was given at the time to the implications of expanding tax support for higher education in this fashion, but the importance of this new dimension has since been increasingly manifested.

In addition to rejecting institutional aid in the early 1970s, the leadership in Congress expressed doubts about heavy emphasis on student loans, although loan programs, begun in the 1950s, continued to grow rapidly throughout the '70s. The doubts expressed on behalf of James O'Hara, chairman of the House Education Subcommittee between 1973 and 1976, by his administrative assistant, James Harrison, perhaps suggest a common attitude at the time.

> In the loan area, Jim O'Hara would deemphasize loans. He came out of law school a few years ago, in another economic recession . . . and he had a law degree, a small but growing family, and a loan. It was not a big loan, as loans go, but it weighed heavily on him, and he has not forgotten that experience. He came away from it (with the loan repaid) but with a pretty firm notion that loans are certainly a form of assistance for lenders, and they are certainly a form of assistance to schools. But neither of the above are students, and students are the only persons who are supposed to be assisted by a student assistance program (Harrison in Keene, Adams, and King 1976, p. 415).

Congressional education leaders did express concern about the impact of federal student aid on low tuition. In 1972, Senator Pell stated that federal student aid should not create incentives for public institutions to raise tuitions, an attitude since expressed by Congressmen James O'Hara and his successor as subcommittee chairman, Congressman William Ford.

Gladieux and Wolanin (1976) describe the key point in the 1972 Senate Education Subcommittee debate concerning the implications for public college tuitions:

> The only real issue centered on efforts by Senator Mondale to modify the Basic Grants formula to incorporate the sliding scale

> [price sensitive] mechanism from his own bill. Mondale wanted to adjust the formula so that a student choosing to attend high-cost private institutions could receive larger awards. He felt the Basic Grant should insure a range of choice among institutions, not just a floor of aid. . . . But the Subcommittee Chairman was dead set against it. Pell objected strongly to the notion of favoring students in expensive schools. He felt it was elitist. "Not everybody has to go to Princeton," Senator Pell said repeatedly. Mondale and Schweiker argued that private higher education should not be stereotyped along the lines of the rich Ivy League school. But Williams and other members sided with Pell and the Mondale scheme was set aside (p. 105.

The result of this decision, later sustained by both houses of the Congress, not only was that grants were to be targeted on the needy, but also that the amount of any individual grant was limited so as to not be based primarily on the institution's tuition. In effect, this came to mean that if public institutions raised their tuitions sharply, grants from the BEOG program—the only federal grant program providing aid to more than 5 or 6 percent of their students —would not increase in proportion to the tuition increase. Most students, even those from families in the lowest income groups, would have to bear either all or a large part of the tuition increase without significantly increased aid. On the other hand, because of the federal government's neutrality toward public and private higher education and the different emphasis placed on tuition as a source of institutional funding by the two types of institutions, nothing was written into the law to discourage tuitions from being increased. Since 1972 the federal grant, work/study, and loan programs have, in combination with one another, become increasingly tuition sensitive. Thus legislation has, in effect, moved somewhat in the direction originally advocated by Senator Mondale. For example, the Higher Education Amendments of 1980 allow, in principal, up to 75 percent of a student's cost of attendance to be covered by grants, regardless of institutional tuition charges.

Congressional action in the 1972 and 1976 amendments to the Higher Education Act of 1965 and afterwards seemed motivated primarily by liberal legislators who assumed that higher education benefited society and were convinced that students from low-income families should be helped. The economists' debate over low tuition did, however, play a background role. For example, the idea of need-based grants was, to a large extent, a refinement and moderation of recommendations of the Carnegie Commission and the Rivlin studies, and congressional distrust of institutions seemed to reflect the second Newman report (1971) (Gladieux and Wolanin 1976).

After the passage of the Higher Education Amendments of 1972 the idea of high tuition plus student aid no longer seemed to be a central issue, although proposals to that effect continued to emerge, even in the late 1970s, in the form of advocacy by economist Robert W. Hartman (in Breneman and Finn 1978) and Boston University President John Silber, whose tuition advance fund idea influenced the Kennedy-Bellmon National Student Loan Bank proposal.

Attention shifted to more specific questions. The price sensitivity of student aid remained an active issue, reflecting the reality that public higher education and private higher education were influenced in fundamentally different ways and the argument that, since resources are limited, public institutions should gradually raise their tuitions and place greater reliance on student aid (Breneman and Finn 1978). Debate over this issue continued in Congress, in the U.S. Office of Education, among the higher education associations, and in the states.

The Higher Education Amendments of 1972 also extended its programs to involve state governments in tangible, although not heavily funded, ways. For example, the State Student Incentive Grant program (SSIG) was established to provide matching funds to encourage the states to create and expand student-aid programs, but the federal program "imposed no requirement that the federally matched scholarship be geared to tuition costs, nor was it even required [until 1976] that state programs be open to students in private institutions" (Gladieux and Wolanin in Breneman and Finn 1978, p. 201). (Also see Hansen 1978 for an assessment of SSIG.) The legislation also contained a section (1202) that created token incentives for states to establish comprehensive postsecondary education planning commissions and, thus, link federal and state interests and accountability efforts in postsecondary education. Currently all but two states have designated such commissions. Federal student aid also increased rapidly after 1972, as is shown in table 2.

The continuing impact, direct or indirect, of this tuition price sensitivity issue is seen in the fact that several older federal student-aid programs (*i.e.*, the Supplemental Educational Opportunity Grant [SEOG], College Work/Study [CWS], National Direct Student Loan [NDSL]), begun after Sputnik or as Great Society initiatives, were made more price sensitive by changes written into the Higher Education Amendments of 1972 and even more so by the Higher Education Act of 1976.

Another initiative from the Higher Education Amendments of 1972 was the half-cost provision in the BEOG program (Deitch 1979). This provision stipulated that no student could receive a

Table 2: Federal support for major programs of assistance to postsecondary education students
(in millions of dollars)

	Actual outlays							Budget Requests		
Program	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Direct outlays										
Basic Education Opportunity Grants	$ —	$ —	$ 47	$ 351	$ 914	$1,452	$1,588	$2,431	$2,262	$2,309
Supplemental Education Opportunity Grants	168	183	190	251	221	223	274	340	370	370
State Student Incentive Grants	—	—	15	15	9	68	48	77	77	77
Subtotal	168	183	252	617	1,144	1,743	1,910	2,848	2,709	2,756
Loans and work study										
College Work/Study	250	359	71	233	475	329	413	550	550	550
National Direct Student Loans:										
Federal Capital Contribution	287	287	281	345	301	245	108	310	286	—
Teacher Cancellations	—	—	—	—	—	—	—	14	15	—
Guaranteed Student Loans	228	250	378	445	431	448	655	999	1,080	1,196
*Interest subsidies**	*201*	*206*	*274*	*334*	*297*	*305*	*470*	*741*	*831*	*874*
*Defaults—Federal Insurance Program**	*27*	*43*	*84*	*111*	*134*	*143*	*185*	*253*	*241*	*298*
Subtotal	765	896	730	1,023	1,207	1,022	1,171	1,873	1,931	1,746

Table 2: Federal support for major programs of assistance to postsecondary education students (continued)

Program	Actual outlays							Budget Requests		
	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Indirect outlays for student entitlements (not based on need)										
Veterans' benefits	1,436	2,016	2,309	3,479	4,301	2,802	2,697	2,120	1,757	1,535
Social Security student grants	521	638	618	840	998	1,181	1,277	1,385	1,565	1,752
Subtotal	1,957	2,654	2,927	4,319	5,299	3,983	3,974	3,505	3,322	3,287
Grand total	2,890	3,733	3,909	5,959	7,650	6,748	7,055	8,226	7,962	7,789
% Need-based grants	5.8	4.9	6.4	10.4	15.0	25.8	27.1	34.6	34.0	35.4
% Loans and work/study	26.5	24.0	18.7	17.1	15.7	15.2	16.6	22.8	24.3	22.4
% VA and Social Security grants	67.7	71.1	74.9	72.5	69.3	59.0	56.3	42.6	41.7	42.2
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Interest subsidies and defaults-federal insurance program are not added into totals.

Source: Economics and Finance Unit, American Council on Education, March 1980, Based on data from the *Budget of the United States Government* and the *Special Analyses of the Budget, FY 1974-1981.*

BEOG grant equaling more than one-half the total cost of college attendance (tuition, room, board, books, and other expenses). By itself, the provision did not encourage tuition increases at public colleges, but it did limit aid to the lowest-income students attending the low-tuition institutions. The seeming injustice of this effect spawned a controversial issue in 1976 when Congressman O'Hara sought its removal, but the small private colleges lobbied (successfully) for its retention. The impact of the half-cost provision on price sensitivity emerged in 1979, a year after the passage of the Middle Income Student Assistance Act (MISAA), when the provision became a bargaining factor in a compromise between public and private college associations. In this compromise, the public sector agreed to support higher and, therefore, more price-sensitive maximum grants for BEOGs, as well as more price-sensitive SEOGs, in return for the elimination of the half-cost provision.

Even though the availability of massive student aid has been cited as a rationale for higher public college tuition, it is difficult to maintain that this availability has been responsible for recent tuition increases, except in unusual circumstances such as the CUNY fiscal crisis. A more certain cause was the high inflation of the '70s. Paradoxically, however, inflation also diminished the fiscal incentive for public institutions to raise tuition. For example, in 1978 when MISAA became law, the family-income ceiling for BEOG eligibility was raised to $25,000, an amount roughly $8,000 above the median family income that year. However, by June 1980, this gap was substantially narrowed by inflation, as evidenced by the U.S. Department of Housing and Urban Development's estimate that the median family income had risen to $20,500. In other words, in only this short period, inflation had made ineligible for aid many of the families it was intended to help.

At about the same time, the century-long trend of declining constant-dollar tuitions in the public sector was halted, or at least interrupted, after 1965. Interruptions also occurred during the Great Depression (Campbell and Siegel 1967) and, as mentioned in chapter 1, after implementation of the highly price-sensitive World War II GI Bill, when, for a brief period, both public and private colleges sharply increased tuitions. Also, there seemed to be a growing reluctance within the federal government to advocate an automatic expansion of federal student aid when tuitions increased for whatever reason. As Ernest Boyer, a former U.S. commissioner of education, explained it: "I don't like it, as public policy, . . . continuing to jack up the price (tuition), and then say, 'Hey now, why doesn't the federal government through taxes, cover it for us? . . . I think that is terrible" (National Public Radio 1980).

After the passage of the Higher Education Amendments of 1972 federal student aid experienced growth pains. The legislation itself was not specific regarding the implementation of many of its initiatives, and the principal responsibility for interpretation was passed to the U.S. Department of Health, Education, and Welfare's Office of Education (OE) (now the U.S. Department of Education). OE determined how program funds were to be distributed, designed formulas for determining student eligibility, and wrote the regulations governing institutional participation with few specific guidelines from Congress. Gladieux and Wolanin (1976) report the difficulties faced by then-commissioner of education Sidney Marland: "There are hundreds and hundreds of pieces in this mosaic of law, literally hundreds . . . suggesting a number of options as to precisely what Congress meant and it depends on whom you talk to as to what Congress meant" (p. 232).

Also, since administrative procedures, in effect, had to be invented, many unanticipated problems with coordination among federal and state governments and institutions soon emerged.

Unresolved problems at the federal level

Among the problems that developed in response to the passage of the Higher Education Amendments of 1972, three seem far from being resolved. These are program needs analysis (*i.e.*, the design of formulas for distributing aid), the institutional roles in the distribution of aid, and fraud and abuse.

Recent papers by Sanda and Stedman (1979), Ratnovsky (1979), and Gill (1978) provide insights into these issues and illustrate the problem of synthesizing the goals of equity and administrative efficiency in government programs providing aid to individuals through the use of formulas.

Sanda and Stedman evaluated a proposal to substitute the uniform methodology of needs analysis, developed by the Keppel Commission, for the Orshansky Poverty Index used in the BEOG program. The reason for this substitution was to simplify the process and to improve coordination among the various federal and state student-aid programs. In the process of evaluating the two methodologies, the authors learned that the manipulation of formula variables easily could overpower the basic designs of either system. For example, with the passage of the Middle Income Student Assistance Act (MISAA) in 1978, many students from middle-income families became eligible for BEOG grants as a result of raising the "tax rate" on family incomes in the Orshansky Poverty Index. Similar formula adjustments also could change the basic character of the uniform methodology process even though the basic rationale differed for each system.

Sanda and Stedman also found unique quirks in each methodology. For example, large families with several members in college were penalized in the uniform methodology. Also, the progressivity of the uniform methodology method was found to depend on answers to a number of detailed questions, such as, whether state and local taxes should be deducted from the tax base and whether assets and home equity should be deducted? As such decisions are made, assessments concerning equity and administrative efficiency in either program vary. The authors conclude:

> The preceding analysis yields one preeminent finding—development of a need analysis system requires many complex choices and decisions for which there is no single response. As a result, no single need analysis system can be characterized as the fair and reasonable system. (Sanda and Stedman 1979).

Ratnovsky (1979) and Gill (1978) also analyzed the problems arising from the use of eligibility formulas. Like Sanda and Stedman, their studies focus on equity and administrative efficiency: Ratnovsky from the perspective of a federal student-aid official inclined toward change through legislation and Gill from that of an institutional student-aid officer who firmly advises, "anyone considering making changes in student financial aid—don't study the existing legislation to make changes, study the existing situation" (p. 57).

From Ratnovsky's perspective, the problem with the BEOG program is that the needs-analysis aspects of it lack a coherent design for integrating the goals of equity and administrative efficiency. He sees the solution as a restructuring of the formulas in accordance with a set of principles, the first of which is to target aid to students from low-income families, as originally intended by the BEOG legislation. Like Sanda and Stedman, he illustrates how incremental adjustments can shift the overall effect of a formula approach away from the original objective even if the core formula seems to set an austere standard. Ratnovsky's principles are that: (1) parent and student contributions to meeting the cost of college attendance should be considered separately, (2) parents should bear the primary responsibility for financing their children's postsecondary education, (3) parents who earn more should pay more, and (4) parental planning and saving for the education of children should be encouraged but the financial-aid system should "not be overly harsh on those not blessed with foresight" (p. v.).

Ratnovsky points out that, under the existing formulas, it is difficult to coordinate administrative efficiency with equity. For example, for purposes of equity, in academic year 1979-80 a dependent student was defined as one who has (1) been claimed as an exemption for income-tax purposes in the past three years, (2) received more than $750 a year from parents in the past three years, or (3) lived at home with parents for more than six consecutive weeks a year in the past three years. Ratnovsky states that items 2 and 3 are "virtually useless" because they are difficult to verify, and item 1 creates an "incentive for middle- and upper-income parents to 'disclaim' for tax purposes, their college-bound children so that they may receive increased financial assistance" (p. 2). In terms of equity, the criteria imply that the federal government will assume responsibility for the payment of educational costs when students have been living independently of their parents. "Thus, the criteria confuse prior support for living costs with ability to pay educational expenses" (p. 2.) With respect to treatment of parental income, Ratnovsky concludes that if a student receives a BEOG grant and grants from other programs, the different expectations for parental contribution for the different programs result in different amounts of aid for students in identical circumstances.

Ratnovsky found that some inequities are common to all existing programs: "the higher the income of parents, the higher the living standard allowed before any sacrifice is expected of the parents"; in the assessment of available income, "tax rates are arbitrarily determined"; by including income-producing assets such as savings and investment, "families who save or invest in their children's educations receive lower federal support . . . [and] by including income-producing assets, these assets are taxed twice. . . . [further] The value of these assets (*e.g.*, home equity) are extremely difficult to measure and verify." By including "non-income-producing assets, "we penalize those who decided to place their prior earnings in such assets as opposed to consuming these earnings. Further, there are conversion costs (sales commissions or interest on a loan, for example) that are not permitted as expenses." Similar problems affect calculations for multiple siblings and student assets (pp. 4-10).

Ratnovsky proposes to reform the federal student-aid system by basing the expected parental contribution on the Bureau of Labor Statistics' "intermediate budget" allowance under which families should be expected to contribute 100 percent of "discretionary income" for each year the family has children in postsecondary education.

One problem with Ratnovsky's proposal may be that even if a way were found to coordinate equity and administrative efficiency more effectively in federal needs analysis, the procedure would be difficult to sustain in the face of annual adjustments to appropriations and periodic adjustments to legislation. In these situations, congressional decision makers, as well as lobbyists, frequently are unaware of how their ideas will affect program formulas. Ratnovsky, as well as Sanda and Stedman, ably identify the current complexities that lend something of a lottery character to federal student-aid programs.

Gill's (1978) assessment of the problems of the BEOG program agrees with Ratnovsky's in the sense that both see the existing system as overburdened with complexity to the point where equity is threatened. Gill, however, points in a different direction. "I am interested in policies and programs, but have long been more fascinated by paperwork and procedures" (p. ii). She argues that, while the BEOG program has contributed along with a "myriad" of other federal, state, and local programs to "significant progress" toward the goal of equal opportunity, it must be evaluated against narrower goals, such as how effectively it "entitles" students to receive federal grant assistance as a matter of right. The BEOG mechanism for distributing student aid among the states, she finds, is "far more equitable" than the state allotment formulas governing the "campus-based programs" (*i.e.*, SEOG, CWS, and NDSL) and, to this extent, the entitlement concept is succeeding.

However, the program has failed in other important respects. The concept of a formula-run national program of aid to individuals without defining an institutional role, for instance, was "a mistake from the beginning" that has proved unresponsive to students (p. 53). Gill also suggests that the BEOG program was at least partially shaped by a presumption of institutional incompetence. She cites Senator Pell: "The basic theme of the Senate bill is that the federal government has an obligation to people rather than institutions. Our experiences over the last two years raise the question, 'who is looking out for the student?' for most public expressions of concern focus on the institution (Pell 1971, pp. 37864-5).

To Gill, this implies that institutions were considered less trustworthy than the BEOG program's central computer, and she provides numerous examples of instances where the computer was exceptionally intolerant of details such as student changes of address and minor informational errors, but remarkably tolerant of its own judgmental errors.

For example, Gill notes the BEOG program has itself tempted legality, as illustrated by a May 15, 1978, revision to validation procedures.

> *Parental Certification for Independent Students Born After 1954:* According to the Handbook, this certification (number 10 of the Validation Form) must be signed and notarized in order to complete the validation process. The decision to include this certification was made after discussions with members of the financial aid community who indicated that this particular group of students were more likely to claim independence when, in fact, they are still dependent on their parents. However, our Office of General Counsel has questioned the legality of requiring parental signatures for independent

> students. Therefore, we are still going to request this certification, but payment cannot be withheld from students who are unable or refuse to provide parental signature. Of course, these students must comply with all other requirements of the validation procedures before payment may be disbursed. We are requesting that students not be informed of this change in advance" (HEW Office of Education, "Dear Colleague" received May 15, 1978).

Gill commented, "Put more simply, tell the students that they must comply, but back down if they refuse. And worse yet, don't tell them that what you are doing may be illegal" (p. 45).

Gill also points to the complexities of the BEOG formula for calculating awards as one factor contributing to errors that sometimes provide gist for newspaper editorials suggesting incompetence at the institutional level. She cites one such editorial, "Study of Student Grant Program Finds 55% of Payments in Error," that appeared in the *New York Times* (December 14, 1979). She also cited a personal experience;

> I attended a Basic Grants Training Project in the Fall of 1977. Session Four was devoted to "Calculating the Expected Disbursement." We were given four problems to complete which involved calculation of part-time awards, or other non-standard factors. Most of the 60 people in the room were experienced in Basic Grants; this was an annual update not a course for beginners. Of the 60 people present, no more than 3 came up with the correct award amount for each problem (and not the same 3 people each time).... It made me wonder about the accuracy of part-time award calculations being made.... It was somewhat comforting to know, however, that 95% of us are too dumb to figure out the exact awards. Or maybe the system is too complex? (Gill 1978, p. 47).

Another feature of the BEOG program is that, although institutions are accountable for the accuracy of awards,

> Not one cent has ever been paid to the institutions which administer the BEOG program. The cost is fully borne by the institution. We are now informed that we may expect $4 per student allowance at the end of the 1978-79 year. We receive a 4% allowance for our "campus-based" programs which is only a fraction of administrative costs.... I applied this $4 allowance to my final statistics for the 1976-77 year. It amounts to a .7% Administrative Allowance compared to 4% "campus-based" funds. Even using a conservative estimate of the cost of operating a financial aid program at our college for one year, it would represent about 3% of the actual administrative cost (Gill 1978, p. 48).

Gill concludes that the essential problem of the BEOG program, as well as of other individual-centered programs of governmental assistance, is that "the chain of causality between aid and its delivery [is long] and thereby becomes inefficient and sometimes counterproductive." She cites Pressman and Wildavsky (1973): "The longer the chain of causality, the more numerous the reciprocal relationships among the links and the more complex implementation becomes" (p. 18).

Many of these problems have contributed to perception of widespread fraud and abuse in the student-aid programs. This is especially true, Gill states, of complexities of the BEOG program that invite fraud and, in fact, make fraud almost indistinguishable from well-intended efforts by students and financial-aid officers. Many institutions have raised similar complaints about other programs.

Despite growth pains and unresolved questions about how effectively aid has been targeted on needy students or whether the dollars could have been better spent lowering tuitions or distributing student aid in some other way, need-based student aid has been extended to millions of students on virtually every campus across the country. Table 3 shows participation by income group in grant, loan, and work/study programs (excluded are veterans and social security beneficiaries) at four types of institutions in the fall of 1978. This is the most recent year for which data are available, but precedes the implementation of MISAA.

Table 4 shows how full-time minority group enrollments increased far faster than majority group enrollments during the '70s. At this time it is not clear whether the increase in minority enrollments reflects student aid. For example, other evidence does not indicate sharply increased college participation by students from low-income families. These data deserve much more of investigation than they have received thus far.

Political challenges to federal student aid in the late '70s

By the late 1970s, congressional interest in providing some aid for students from middle-income families increased as a result of a perceived middle-income reaction. This interest crystalized in 1977 in the form of proposals for tuition tax credits. The introduction of these proposals that year took many by surprise, including the higher education associations.

The immediately perceived threat of tuition tax credits was one of substitution. Many people and organizations—associations, HEW, the congressional staffs, high- and low-tuition advocates alike—feared that if a large tuition tax credit program were established, support for need-based student aid would erode (Corwin and Knepper 1977). Senator Daniel P. Moynihan, who emerged as the most forceful congressional advocate for the tax credit concept, laid out the rationale in a series of Senate hearings. The middle class, he insisted, was being neglected by student aid, and HEW

Table 3: Aid recipients and total undergraduate students by income and type and control of institution, 1978-79

	Public Two-year				Public Four-year				Private Four-year				Proprietary			
	Dependent		*Independent*		*Dependent*		*Independent*		*Dependent*		*Independent*		*Dependent*		*Independent*	
	Total students	% aided	Total students	% aided	Total students	% aided	Total students	% aided	Total students	% aided	Total students	% aided	Total students	% aided	Total students	% aided
Income																
$ 0- 5,999	107,682	53.4	461,868	48.9	157,219	76.5	352,322	61.9	64,506	88.7	74,745	80.9	16,967	71.6	109,767	74.0
6,000-11,999	122,173	68.1	295,089	24.5	235,244	67.9	125,748	34.1	133,743	71.7	27,988	49.3	24,454	65.0	36,424	33.8
12,000-17,999	161,722	23.2	139,139	9.2	339,745	53.4	79,081	16.5	171,974	73.5	23,278	26.5	22,827	51.6	9,854	17.7
18,000-24,999	149,448	16.0	151,233	5.3	417,845	29.6	69,633	4.5	211,767	60.8	20,646	18.8	30,572	50.4	3,729	27.4
25,000-or more	281,899	6.8	126,112	2.1	634,470	9.1	54,917	.8	477,936	27.4	23,410	8.4	26,218	23.[illegible]	1,758	none applied
Don't know	281,614	27.2	87,823	36.9	425,191	25.5	37,581	66.0	267,947	42.7	11,533	81.0	120,521	46.4	28,552	78.8
Total	1,104,536	27.0	1,261,254	28.0	2,209,712	34.0	719,482	42.1	1,327,873	49.2	181,600	52.9	241,560	48.6	190,084	62.5

Notes: The following types of aid are included: BEOG, SEOG, CWS, state scholarship or grant, local or private scholarship, GSL, NDSL, and other loans. Income refers to personal income for independent students and parental income for dependent students.

Source: Policy Analysis Service, American Council on Education, May 1980; based on student reported data from AY 78/79 study of Program Management Proceedings in the Campus-Based and Basic Grant Programs conducted by Applied Management Sciences for the Office of Evaluation and Dissemination of USOE under contract number OE-300-78-0498. The AY 78/79 study sample is representative of all undergraduate students enrolled half-time or more.

Table 4: Full-time enrollment in colleges and universities—all students and minority students, 1970 and 1978

	American Indian/ Alaskan Native		Black Non-Hispanic		Asian/Pacific Islanders		Hispanic		Total Minority		Total (including White Non-Hispanic & Non-Resident Aliens)	
	number	*% total*	*number*	*% total*	*number*	*% total*	*number*	*% total*	*number*	*% total*	*number*	*% total*
1970												
Undergraduate full-time	26,914	0.5	344,819	6.9	51,705	1.0	102,788	2.1	526,226	10.6	4,965,768	100.0
Graduate and first professional full-time	1,542	0.3	21,110	4.1	8,866	1.7	5,956	1.2	37,474	7.3	512,004	100.0
Total	28,456	0.5	365,929	6.7	60,571	1.1	108,744	2.0	563,700	10.3	5,477,772	100.0
1978												
Undergraduate full-time	36,192	0.6	600,902	10.6	113,790	2.0	196,451	3.5	947,335	16.7	5,663,910	100.0
Graduate and first professional full-time	2,514	0.4	31,246	5.2	13,782	2.3	13,170	2.2	60,712	10.1	599,630	100.0
Total	38,706	0.6	632,148	10.1	127,572	2.0	209,621	3.3	1,008,047	16.1	6,263,540	100.0
Change												
# Increase	10,250	1.3	266,219	33.9	67,001	8.5	100,877	12.8	444,347	56.5	698,142	100.0
% Increase	38.1		77.2		129.6		98.1		84.4		14.1	

Source: U.S. Office of Civil Rights from National Center for Education Statistics data.

had created a hopelessly cumbersome bureaucracy that could be avoided by extending tuition tax credits to parents not only of college students, but also of private elementary and secondary school students.

The response of HEW Secretary Joseph Califano, after much prodding from House and Senate leaders, was to find funding, ultimately more than $1 billion, for a middle-income student-aid alternative to the tuition tax-credit idea. This alternative ultimately became the Middle Income Student Assistance Act of 1978 under which eligibility for BEOG grants was extended to middle-income students through the adjustment of the Orshansky Poverty Index. Students from a family of four earning $25,000 with total assets less than $25,000 were made eligible for minimum grants of $200, and students from the lowest income families could receive grants as large as $1,800.

Furthermore, all of the family-income limits were removed from the Guaranteed Student Loan (GSL) program, which provided loans that were interest-free while students were enrolled in college and that carried an interest rate of only 7 percent after that. New York Senator Jacob Javits reasoned that it would be less costly and cumbersome for government to give a "Rockefeller" a subsidized loan than to maintain a bureaucracy to prevent it. However, some have since wondered whether the Senator's reasoning anticipated that the volume of GSLs would almost double between 1978 and 1980. This volume increased total federal interest subsidies to banks and market purchasers of loan paper to $831 million, more than three times the amount spent in 1980 ($241 million) to cover defaulted loans.

Other political and fiscal problems emerged to challenge student-aid funding in 1980. In a major effort to balance the federal budget and to increase defense spending, the Senate Budget Committee passed a resolution that, if sustained, would have cut back the family-income eligibility ceiling in the BEOG program to $15,000, thus, in effect, undoing middle-income assistance. Other student-aid authorizations narrowly missed major cuts in a see-saw battle of domestic and defense spending amendments and budgetary authorizations.

The central lesson, then, emerging from the recent federal experience is that future stability in the federal student-aid programs cannot be taken for granted. At the bottom line there is no federal policy on higher education (Finn 1978). Existing programs seem to be challenged by other ideas with increasing frequency, although until now student aid has managed to survive, prosper, and expand its influence in the states. The manner in which this has been accomplished will be discussed next.

Decisions, trends, and new issues at the state level

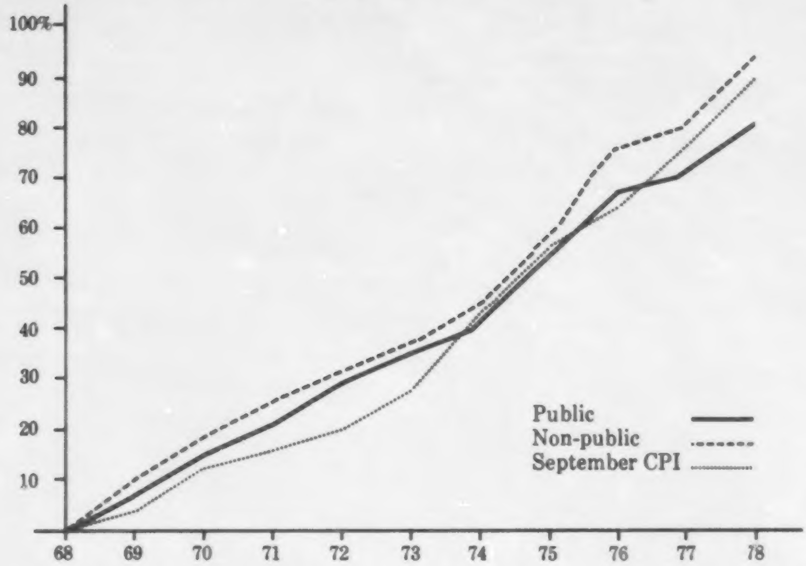
The economists' debate over higher education financing may have had its greatest impact on public college tuitions before large-scale funding for federal student-aid programs began in the mid-1970s. This is suggested by public and non-public college tuition trends in many states during the years immediately following the Vietnam War, as illustrated in Figure 1. A case study of Wisconsin (Stampen 1979) also suggests a link between the economists' debate and public college tuitions. Cost of attendance and enrollment trends in Wisconsin during the early '70s generally paralleled national trends. In the aftermath of the Vietnam War, attitudes in the Wisconsin state government became increasingly critical of public higher education. There were serious proposals, all citing recent econometric research, advocating the establishment of full-cost tuition with accompanying cuts in state appropriations for public institutions and greater reliance on student aid which, at that time, was not very substantial. None of these proposals was enacted, but public college tuitions were influenced by them. For example, during the University of Wisconsin System's 1969-71 biennium, tuition as a percentage of the cost of instruction increased from 20 to 25 percent, and the budgetary base upon which the cost of instruction was calculated also was expanded somewhat after that. (Stampen 1979).

Between 1972 and 1974, when public college attendance costs increased faster than the Consumer Price Index (see Figure 1), enrollments declined sharply in most of the state's four-year institutions, as they did in many other states among public four-year colleges (Stampen 1980). After 1974, however, public college tuitions rarely increased faster than the Consumer Price Index, and, no doubt aided by the mid-'70s expansion in federal student aid, enrollments resumed their upward course except in 1976 and 1978.

One possible explanation why real-dollar tuitions in Wisconsin did not increase as rapidly after the enrollment declines of the early '70s was that enrollments had declined when tuitions increased, and student aid had not appeared to be an effective substitute for low tuition (Stampen 1979).

In contrast with the possibility of tuition-induced enrollment declines in the early '70s, the unexpected and nationwide decline in enrollments in 1976 and 1978 seems attributable to cuts in certain federal student-aid programs. In 1976, college enrollments declined by 1.8 percent. However, benefits for 3.7 million veterans expired that year, and the number of college-enrolled veterans declined by 376,000, a figure representing 3.4 percent of college enrollments in 1975. In other words, the enrollment of non-veterans continued to increase in 1976. The unexpected decline in 1978 coincided with

Figure 1: Tuition, room and board, and the Consumer Price Index—public and non-public institutions, 1968-78



	Public		Non-public		September CPI	
Year	$	% increase	$	% increase	index	%increase
1968-69	1,117	0.0	2,321	0.0	105.1	0.0
1969-70	1,203	7.7	2,530	9.0	111.2	5.8
1970-71	1,287	15.2	2,738	18.0	117.5	11.8
1971-72	1,357	21.5	2,917	25.7	122.2	16.3
1972-73	1,458	31.5	3,038	30.9	126.2	20.1
1973-74	1,517	35.8	3,164	36.3	135.5	28.9
1974-75	1,617	44.8	3,386	45.9	151.7	44.3
1975-76	1,725	54.4	3,691	59.0	163.6	55.7
1976-77	1,874	67.8	4,058	74.8	172.6	64.2
1977-78	1,900	70.1	4,152	78.9	184.0	75.1
1978-79	2,009	79.9	4,477	92.9	199.1	87.4

Note: D. Kent Halstead in *Higher Education Prices and Price Indexes: 1978 Supplement* (Washington, D.C.: The National Institute of Education) p. 31. demonstrates that during the period covered by Figure 1, tuitions increased faster than the Higher Education Price Index while room and board increases lagged behind, except at public two-year colleges.

Source: U.S. Department of Health, Education and Welfare, National Center for Education Statistics, Projects of Education Statistics to 1986-87 and special tabulation of Table 36 for 1977-78 and 1978-79.

the incorporation into the BEOG program of a new system for the simultaneous processing of several different kinds of aid-application forms (the Multiple Data Entry System). That year 500,000 applicants were rejected, at least initially, by the program, mostly because of clerical errors on the application forms. It is significant, perhaps, that the historically black institutions, both urban and rural, experienced the sharpest declines in 1978. In 1976, it was the urban institutions that were hit hardest (Stampen 1980).

No doubt there were other factors influencing enrollment during the 1970s, but fluctuations do seem, to a considerable extent, to have been associated with cost-of-attendance factors, which, on the whole, were supportive of expanded higher educational opportunity. Thus, Leslie (1977) has described the '70s as a "Decade of Progress."

Table 5 indicates that, during that decade, almost nine out of ten new college students enrolled in public institutions. However, private-sector enrollments grew at a rate almost four times greater than the percentage increase in the number of high school graduates.* Table 6 shows that public college revenues did not quite keep pace with inflation and that enrollment increased between 1968 and 1977. Therefore, these institutions may have suffered a slight loss in total revenues per student. In fact, the only category showing revenue gains was tuition.

The only category in which both the public and the private sectors declined was institutional aid, perhaps, in part, reflecting the phasing down, and, in some cases, phasing out, of federal support for research, graduate student fellowships, and facilities and equipment grants. Both sectors raised tuition, but the constant-dollar increase in the private sector was much greater than in the public sector, as was true also for student aid. The private sector appears also to have done better than the public sector in terms of revenues from other sources, such as endowments and, perhaps, auxiliary enterprises.

These are gross aggregate figures, and conditions among individual institutions in both sectors vary greatly from the average. However, the overall pattern suggested is that many private institutions, in a decade of enrollment growth, were able to maintain enrollments despite higher tuitions, even though they gained only a small fraction of the total national enrollment increase. Student aid may have contributed to this enrollment stability by cushioning the impact of higher tuitions for those who chose private institutions.

---

*Among public and private four-year institutions, enrollment ratios remained about the same as at the beginning of the 1970s, however in this category almost seven out of ten new students enrolled in public institutions.

Table 5. Headcount enrollment by institutional type and control
(in thousands)

	1969-70	1979-80	Number increase	Percentage increase
Public				
Four-year	4,050	5,027	977	24.1
Two-year	1,847	4,069	2,222	120.3
Total	5,897	9,096	3,199	54.2
Private				
Four-year	1,978	2,430	452	22.9
Two-year	130	181	51	39.2
Total	2,108	2,611	503	23.9
Total	8,005	11,707	3,702	46.2
High school graduates	2,896	3,097	201	6.9

Note: Enrollments for public two-year colleges in 1969-70 are overstated due to the fact that until 1972 enrollments of many two-year campuses that were parts of multi-campus institutions or systems were included in totals for four-year institutions. *Projections of Education Statistics to 1986-87*, p. 25.

Source: National Center for Education Statistics, *Projections of Education Statistics to 1986-87* and "Opening Fall Enrollment Final April 1980" Summary Tables.

On the other hand, the public institutions, whose tuitions remained relatively low, carried the major burden of increased enrollments and, therefore, appear to have failed by a narrow margin to keep revenues current with the combined effects of inflation and enrollment.

This pattern deserves close investigation, for it may have important implications in states where enrollments may decline sharply in the '80s. In an environment of declining enrollments, it may not be feasible for many private colleges to continue a high-tuition strategy. For the public sector, the pattern suggests pressure to increase tuitions further and to place greater reliance on student aid, unless institutional aid or funds from other sources increases more rapidly than was true in the 1970s.

New issue: the impact of federal student aid on states and institutions

One [illegible]ction to recent changes stemming from federal higher education legislation, and student aid in particular, is provided by

Table 6: Per student support for higher education by source—public and private institutions, 1968-77 (in 1977 dollars)

	Institutional aid					
	Tax Revenue (fed., state, local)	Tuition revenue	Other revenue	Total	**Student Aid**	**Enrollment** (in 1000's)
1968 in 1968 dollars						
Public	$1,213	$ 221	$ 457	$1,871	$76	5,469
Private	817	1,035	1,230	3,082	93	2,102
1968 in 1967 dollars						
Public	2,147	391	809	3,347	134	5,469
Private	1,446	1,832	2,177	5,455	164	2,102
1977 in 1977 dollars						
Public	2,135	435	737	3,307	398	8,847
Private	1,314	2,122	2,386	5,822	680	2,437
Change 1968-77						
Public						
Dollars	-12	+44	-72	-40	+264	+3,378
Percentage	- .6	+11.3	- 8.9	- 1.2	+197.0	+61.8
Private						
Dollars	-132	+290	+209	+367	+516	+335
Percentage	- 9.1	+ 15.8	+ 9.6	+ 6.7	+314.6	+15.9

Source: (Institutional aid) National Center for Education Statistics, *The Condition of Education*. 1979 edition, Table 3.17. (Student aid) "Amount and Percentage Distribution of Current Funds Revenues of Institutions of Higher Education by Control and Type of Institution and Source of Funds: 1968 and 1977." *Digest of Educational Statistics* 1979.

the Sloan Commission on Government and Higher Education. The commission concluded that federal student aid contributed to the advancement of access and choice and made recommendations somewhat similar to those of the Carnegie Commission and its successor, the Carnegie Council. The Sloan Commission would continue existing student grant programs but would place greater emphasis on loans through the establishment of a national student loan bank. The loans, however, should be intended primarily to help students attending private colleges deal with tuition expenses, and the BEOG program should continue to help students attending either public or private colleges meet living expenses. The Sloan Commission also advocated the elimination of the BEOG's half-cost provision but recommended increased emphasis on "self-help" so that every student, either through work or borrowing, would contribute to his or her own education. Also, like recent positions taken by the Carnegie Council, the commission disapproved of further extensions of grants to students with family incomes higher than those already receiving aid.

Both the Sloan Commission and the earlier Carnegie Commission stressed low tuition at least in the first two years at open-access two-year and four-year colleges. Notably absent from the Sloan report was any questioning of the societal benefits of higher education or any suggestion that low tuition distributed benefits from the poor to the rich or was an ineffective means of promoting higher education opportunity.

A primary conclusion of the Sloan Commission that was completely absent from reports of the earlier commissions highlighted an unanticipated impact of federal student aid:

> Now the governments look less like helpful partners and more like unfriendly policemen. With the growth of student aid, the federal government has become more important as a patron, and our colleges and universities are widely dependent on it for their operating budgets. It has also become more intrusive as a regulator. Government enforcement of laws and regulations encroaches on decisions held to be central to the traditional autonomy of the academic world, and imposes increased costs. To many in higher education, the government is at once indispensable and intolerable (1980, pp. 36-37).

The federal student-aid programs were designed to give money to students rather than to institutions. One of the arguments made in favor of this approach was that it would keep the federal government out of direct involvement in the affairs of the institutions. Instead, however, the federal student aid has been used as a primary instrumentality for an increasing degree of regulation of institutions either directly by the Department of Education or through other agencies. This development has spawned a number of student-aid-related issues, among which is the certification of institutional eligibility for participation in federal programs through voluntary accreditation.

Accreditation

During the greater part of the 20th century, higher education accreditation stressed voluntary relationships between private accrediting agencies and colleges and universities, with few, if any, formal links with governments and relatively little participation on the part of non-collegiate institutions. Also, as is still the case, institutions, not governments, paid the accrediting agencies for their services. Institutional self-evaluation conducted in accordance with standards established among "peer" institutions was the core of the process, and institutions sought accreditation when they perceived reasons for doing so.

The accrediting agencies themselves also never claimed the ability to define academic "quality." The relationship of accreditation to academic quality was dependent on the reputations of the accrediting agencies and the processes they coordinated.

The Veterans' Readjustment Act of 1952 (the Korean War GI Bill) is widely recognized as a starting point in the expansion of federal activity in the accreditation area. In that year the U.S. commissioner of education published a list of 28 nationally recognized accrediting agencies and associations that he determined could be relied on to identify institutions whose programs were of sufficiently high quality to justify the enrollment of federally aided students. The purpose of the list was to assist state approval agencies in protecting the federal government's investment in student aid and thus, to avoid the many abuses that followed implementation of the GI Bill of 1944. However, it soon was discovered that only a small fraction of the nation's public and private vocational schools were accredited by agencies on the commissioner's list.

In recent years the federal government increasingly has looked to accrediting agencies for assurance regarding the quality of institutions enrolling federal student-aid recipients. In addition, the government has encouraged expansion of the list of participating accrediting agencies and postsecondary institutions, and now there are 74 (13 regional and 61 specialized) accrediting agencies listed. Among the specialized agencies, more than half are associated with health care. Also, the list of federally eligible institutions now includes over 8,700 postsecondary institutions of which over 2,000 are hospitals and clinics and more than 4,000 are accredited. One of the most serious frustrations for accrediting agencies in their role as certifying bodies is the federal government's insistence on common standards for all postsecondary institutions, despite the many basic differences among the various types of institutions. Critics have charged that, as far as the federal government is concerned, there should be little basis for distinguishing between Harvard and a barber's college.

The Office of Education's statutory authority for using accreditation stipulates that the commissioner of education shall publish a list of nationally recognized accrediting agencies and associations that he determines are reliable authorities as to the quality of the instructional programs at postsecondary institutions. However, over the years, the office has promulgated more elaborate requirements, until now there are numerous published regulations, advisory committees, requirements for periodic program review, and so forth.

The basic requirements for institutional eligibility are 1) state licensing, 2) accreditation or its equivalent, and 3) the satisfaction of specific federal program requirements. Meeting these basic requirements gives an institution only threshold eligibility. The institution still has to be reviewed and approved by the Office of Student Financial Aids for each student-aid program under its supervision (*i.e.*, BEOG, SEOG, CWS, etc.). There are over 400 federal programs that give money directly or indirectly to institutions of higher education, but the Office of Education programs are the only ones that involve accreditation for institutional certification. Another unique characteristic of the Office of Education program is that institutions are required to spend their own funds on accreditation studies to maintain their eligibility to enroll federal student-aid recipients.

With the rapid expansion of federal student assistance following passage of the Higher Education Amendments of 1972, accreditation assumed increasingly greater importance as a certification mechanism. However, the federal government has been growing impatient with what it perceives as the collective failure of accreditation agencies to satisfactorily certify institutional standards acceptable to it. For example, accreditation, once received, is rarely lost. Further, the institutional accrediting agencies have been reluctant to accept the concept of representing governments to institutions, and they oppose, in alliance with institutions, direct federal involvement in institutional evaluation. On the other hand, some specialized accrediting agencies (*i.e.*, those representing individual professions and disciplines) have seemed eager to join forces with the federal government in adopting mutually acceptable standards. Thus, there are divisive issues among the accrediting agencies themselves. On the whole however, the line of political cleavage has fallen up to now between the federal government on the one side and the institutions and accrediting agencies on the other.

John Proffitt, director of the U.S. Department of Education's Division of Eligibility and Agency Evaluation, advocates a higher degree of direct federal involvement with specialized accrediting agencies and severance of the federal link with institutional accrediting agencies, which he feels are not sufficiently oriented toward federal objectives. The widely heralded abuses by some institutions in the handling of student-aid funds, he has insisted, make it even more important than before for the government to know "how its money is being spent." For this, he wants the accrediting agencies to certify institutional "probity" as well as academic competence (Jacobson 1980).

The accreditation issue illustrates two by-products of the federal government's unwillingness to acknowledge differences among different kinds of institutions. One is that regulatory solutions can be neither simple nor efficient in terms of bureaucratic manpower and costs to institutions. The other is that the process itself breeds a presumption of institutional guilt, which, in turn, can easily lead, and has led, to more government regulation. Proffitt, for example, cites abuses in student aid as an institutional problem, while Ratnovsky (1979), and Gill (1978) suggest that design of the program (*i.e.*, integrating the goals of equity and administrative efficiency) and complexity may be at fault.

In the '70s governments did assume increased authority over higher education, frequently through the instrumentality of federal student aid, which in the '60s and '70s were cited by many as the more desirable alternative to institutional support because, among other things, it held the promise of less federal intrusion on the campus. For example, responsibility for access was transferred from institutions to state student-aid agencies created in response to federal legislation. Also, federally initiated "1202 Commissions" were established in each state, and these agencies often were given oversight responsibilities university-wide in scope.

The important point in the example of accreditation is not accreditation itself. Rather, as used here, accreditation illustrates how an idea for aiding students can, in effect, transfer important elements of higher education decision making from institutions to private accrediting agencies and state agencies but, ultimately, to federal agencies.

The development of procedures for institutional accountability to the federal government perhaps was inevitable following the rapid expansion of student aid. However, the effect of the procedures adopted in such areas as academic autonomy depends heavily upon what the oversight agency perceives as its responsibilities vis-a-vis institutional accountability. Benefits might come of efforts to build good roads through what Finn (1978) refers to as the "regulatory swamp" by exerting the influence of the federal government to simplify and improve the aid-distribution and accountability systems so that institutions can comply without excessive federal intrusion or cost to the institution. On the other hand, there might be few long-lasting benefits if procedural accountability continues to be confused with effective services.

Assessment

In recent years, the most difficult question to answer for anyone associated with higher education is whether conditions are becoming better or worse—or both.

On the positive side, the heated debate over low tuition and/or student aid that ushered in the 1970s seems to have helped inform decisions beneficial to both students and institutions. Economic barriers for students from low-income families have been reduced substantially, and students from low- and lower-middle income families have benefited from the expansion of student aid. Low tuition and student aid sustained the public sector's traditional charge to provide opportunity for those who could benefit from higher education, and increased enrollments were matched by state appropriations sufficient to more or less maintain institutional capacity to serve. Private higher education benefited as the "tuition gap" between public and private colleges, at least for students from low-income families, was, to some extent, offset by the increased availability of student aid.

In higher education research, some important lessons may have been learned, especially with respect to improved understanding of complex research methodologies and increased sensitivity to the complexities of social policies and their human environments. It seems particularly important that, in the future, higher education research not be dominated by any single discipline or approach. Economists deserve an important role, but there is also a need for more involvement by political scientists, historians, demographers, anthropologists, sociologists, social philosophers and psychologists, and students of education who often develop and apply research in the other disciplines.

In retrospect, the most remarkable occurrence during the '70s was the enactment of the Higher Education Amendments of 1972, which affirmed the societal goal of universal access to postsecondary education as a citizen's right. This action was particularly remarkable because it occurred at a time when the political atmosphere seemed hostile to the continued development of higher, let alone postsecondary, education.

On the negative side, there were many difficulties associated with implementing the goal of universal postsecondary educational opportunity and with assimilating student aid into historic patterns of financing higher education. The clearest problem to emerge from this review is the lack of an overall design for guiding federal higher education initiatives. Among specific problems were the following:

1. Federal aid was accompanied by a purported neutrality toward different kinds of colleges, universities, and schools. However, contrary to intended neutrality, the federal approach tended to press different kinds of institutions into a common mold.

2. The design of the federal student aid created some difficult problems. The student-aid delivery system had too many causal links, often involving decisions by students, institutions, state government, federal agencies, and banks in a single transaction. Because the chain of causality was long and complex, the system became highly bureaucratic and accountability at any level was made difficult. This bred distrust, which, in turn, bred further regulation and a continuing spiral of alienation and ineffectiveness.

3. The federal government's aversion to institutional aid also has been a problem that may be troublesome in the future, particularly in states where enrollments decline sharply. In such situations, institutional revenues will be difficult to sustain, especially at private colleges that have relied increasingly on high tuitions and student aid during a period of growing enrollments.

4. Finally, federal student aid seemed to emphasize procedure more than results. For example, there was conflicting evidence that federal need-based student aid had appreciably increased college attendance by students from low-income families above what it was before the expansion of federal student aid in the '70s, although important progress in this area may be indicated by increased enrollment by minority group students. In short, there may be problems with student income data associated with the delivery of student aid. This area deserves far more research in the future. If student aid has not effectively improved access for students from disadvantaged families, the reason may be that students from very low-income families frequently come from situations where it is difficult to acquire the academic skills prerequisite to success in college. Other forms of assistance, such as greater attention during the precollege years, may be needed to improve access for those from disadvantaged backgrounds. Under continued pressure of these kinds, public institutions may find it increasingly difficult to defend their base of institutional support, and private colleges and universities to defend their autonomy. For both, the convergence of federal issues on the states increasingly made higher education decision making a function of political arenas, weakening the traditional patterns of academic governance that has served society well.

Chester Finn (1978) concluded from his study of the federal system that the basic nature of Congress is to pass complex legislation that is difficult for federal agencies to interpret and translate into programs and regulations, and that this system is not likely to change. Such a process clearly compounds efforts to achieve effective social legislation. Despite this inherent obstacle, there seems to be agreement within higher education that problems associated with the placement and design of federal student aid be solved quickly, since challenges to this important resource emerge with increasing frequency.

One way to improve the existing system without dramatically altering it might be to create a criterion (at least) or an advisory mechanism (at most) for Congress whereby specialized expertise in the area of legislative design and implementation is consulted regularly. A partial model for such an undertaking could be Wisconsin's Legislative Council, an academically initiated reform that has long outlined successful legislation in that state. More immediately, it would be helpful if regulation writers would consider institutions innocent until proved guilty rather than attempting to preclude the possibility of guilt through labor-intensive forms of regulation.

Recent change and public higher education finance

The case against low tuition as a means of providing access and opportunity seems weaker at the beginning of the 1980s than it was in 1970. Low tuition supplemented by student aid seems to continue to be the most effective means of achieving the goal of access to higher education opportunity. In retrospect, those researchers who disputed the feasibility of societal improvement through public investment in education, a primary justification for low tuition, were not sustained by subsequent research. Those who charged that low tuition transfers benefits from the poor to the rich also were found to have based their case on faulty evidence. The CUNY experience questions whether high-tuition/high-aid strategy can feasibly advance equitable and efficient higher education policy on a large scale.

Even so, when the administration and the Congress decided to provide a federal initiative for advancing postsecondary educational opportunity, they rejected the evidence of those who perceived an issue in higher education financing. They assumed the principle of low tuition and elected, with the Higher Education Amendments of 1972, to place almost total reliance on need-based student aid. Nevertheless, this action did not resolve the debate, which continued both in and outside of Congress.

Efforts to employ federal student aid as an inducement for increasing public college tuitions generally have been unsuccessful, except in unusual fiscal crisis situations. However, experience gained from such programs as the World War II GI Bill suggests such an impact in the future if combinations of the following conditions emerge: (1) federal student aid becomes highly tuition-sensitive; (2) federal student aid flows increasingly to the nonpoor; (3) state appropriations for public colleges and universities decline; or (4) many states establish fixed relationships between tuition and instructional appropriations and demonstrate a willingness to match higher tuitions with higher state appropriations.

With regard to the fourth condition, there is little, if any, evidence of states being willing to match high tuitions with high state appropriations. Where tuitions have increased with unusual rapidity, institutional appropriations generally have lagged far behind. On the other hand, there is evidence of some movement in the direction of the other three conditions. The federal student-aid programs have become more tuition-sensitive, and passage of the Middle Income Student Assistance Act marked a departure from the original focus on students from low-income families. However, both these developments have been modified by persistent high inflation, and, therefore, the long-term developments remain to be seen.

Regarding the third condition, in many states—perhaps most—public institution appropriations have failed to keep pace with the combined effects of inflation and enrollment increases. Also, high tuition has been resisted by important political constituencies in the states, particularly students, their parents, and prospective students. In this situation, the question of whether the weakening of institutional appropriations is related in any way to the recent expansion of federal student aid deserves investigation. Certainly, the high inflation and repeated economic crises of the past decade have threatened institutional finances. The mere existence of large amounts of federal student aid must encourage the impression among state lawmakers that choices can be made safely between aid to students and aid to institutions. Given the complexity of federal student aid and the difficulty of assessing it, the fact that student aid does not support instructional programs at public institutions might easily be overlooked.

The final question is how should public higher education be financed in light of recent changes? In the author's judgment, recent changes, including research, experimentation, and feedback from decisions made over the past decade support retention of low tuition both as the foundation for public college financing and as society's primary guarantee of access to higher education opportunity. Indeed, there seem to be few alternatives as long as mass access to high education remains a high societal priority. Student aid has not been demonstrated as a viable substitute for low tuition in terms either of ensuring college access for the needy or in maintaining institutional capacity to serve. However, low tuition, supplemented by need-based student aid, offers several important advantages that neither can provide separately:

For students. By itself, low tuition provides an acceptable level of financial risk for the majority of citizens contemplating college attendance. Augmented by aid targeted to low-income students, acceptable levels of risk are extended to the vast majority of citizens. Also, low tuition is simple and non-bureaucratic, and student aid limited in the amount needed by low tuitions might be made simpler through improved design at the federal level.

For students and institutions. Both low tuition and student aid successfully obtain large amounts of capital for investment in human resources. However, only low tuition and the institutional appropriations that accompany it regularly obtain large amounts of capital for investment in institutional capability to meet student demand. As a supplement, student aid targeted to students from low-income families expands investment in capacity and programs, but it cannot do so without low tuition.

For society. Financing public higher education through low tuition and further facilitating access to public and private higher education through student aid is a major expense for society. However, higher education is one of the few government-assisted services that most citizens hope to use at some point in their lives. Higher education also is vital to the maintenance and future development of the national economy and serves as society's principal avenue to middle- or upper-income occupations; the necessity of an educated citizenry for the maintenance of a democracy seems obvious. These and other reasons justify the universal participation of taxpayers in the financing of higher education. Ideally, however, this participation should be under progressive tax systems, since such systems can be made to guarantee that those who most materially benefit from higher education return the most dollars to society.

To these advantages of following a low-tuition strategy supplemented by student aid, Levin (1979) maintains that not following such a strategy would lead to unacceptable consequences. He notes that:

> Some economists have suggested eliminating government subsidies to college education so that the cost to the individual will rise and the rate of return will decline. Such a step would reduce the demand for a college degree and bring the labor market back to balance. . . . [This solution] does not recognize that education represents the dominant path for social mobility in our society, particularly as other routes for attaining higher occupational status and income have been closed off. If access to this path is blocked, the frustration would simply be directed toward other institutions and would move into the streets (p. 47).

Bibliography

The ERIC Clearinghouse on Higher Education abstracts and indexes the current literature on higher education for the National Institute of Education's monthly bibliographic journal *Resources in Education*. Many of these publications are available through the ERIC Document Reproduction Service (EDRS). Ordering number and price for publications cited in this bibliography that are available from EDRS have been included at the end of the citation. To order a publication, write to EDRS, P.O. Box 190, Arlington, Virginia 22210. When ordering, please specify the document number. Documents are available as noted in microfiche (MF) and paper copy (PC).

Aaron, Henry J. *Politics and the Professors: The Great Society in Perspective*. Washington, D.C.: Brookings Institution, 1978.

Allen, Edwin J., Jr. "Higher Education in the Eighties & Nineties: U.S. Demography and Institutional Enrollment." *Trends 2000 Centerpiece*, Association of American Colleges, May 1978.

American Association of State Colleges and Universities. "Reaction to the Committee on Economic Development Report." Press release. October 1, 1973.

Arech, Harvey A. *How Effective is Schooling? A Critical Review and Synthesis of Research Findings*. Rand Corporation, 1972.

Babbidge, Homer D., Jr., and Rosenzweig, Robert M. *The Federal Interest in Higher Education*. New York: McGraw-Hill, 1962.

Barnes, Gary T. "Determinants of the College Going and College Choice Decision." University of North Carolina at Greensboro, n.d.

Bishop, John. "The Effects of Public Policies on Demand for Higher Education." *Journal of Human Resources* 12 (1977): 285-307.

Bishop, John, and Van Dyke, Jane. "Can Adults be Hooked on College? Some Determinants of Adult College Attendance." Institute of Research on Poverty discussion paper, 319-375. Madison: University of Wisconsin, 1975. ED 122 664. MF-$0.98; PC-$4.55.

Bowen, Howard R. *Investment in Learning: The Individual and Social Value of American Higher Education*. San Francisco: Jossey-Bass, 1977.

Bowen, Howard R., and Minter, John W. *First Annual Report of Financial Trends in the Private Sector of American Higher Education, 1975*. Washington, D.C.: Association of American Colleges, 1975. ED 119 570. MF-$0.98; PC-$7.77

Breneman, David W. "Distribution of Financial Aid: Is Anyone Really Hurting?" Paper presented at College Board National Forum, October 29-31, 1978, in New York. ED 171 206. MF-$0.98; PC-$3.05.

Breneman, David W., and Finn, Chester E., Jr., *Public Policy and Private Higher Education*. Washington, D.C.: The Brookings Institution, 1978.

Brown, Warren. "When Workers Say Never on Sunday Students Help Preserve Southern Weekend in Georgia Factory." *Washington Post.* May 17, 1980.

Bureau of the Census. *Social and Economic Characteristics of Students: Current Population Reports.* Washington, D.C.: October 1978.

Campbell, R. and Siegel, B. "The Demand for Higher Education in the United States, 1919-64." *American Economic Review,* (June 1967); 483-494.

Carlson, Daryl E. "Student Price Response Coefficient for Grants, Loans, Work/Study Aid and Tuition Changes: An Analysis of Student Surveys." Presented to Policy Development Group, Assistant Secretary for Education, Department of Health, Education, and Welfare, Washington, D.C., November 13, 1974.

______. *A Flow of Funds Model for Assessing the Impact of Alternative Student Aid Programs.* Prepared for the Assistant Secretary for Education, Department of Health, Education, and Welfare, Stanford Research Institute, 1975. ED 123 992. MF-$0.98; PC-$10.87.

Carnegie Commission on Higher Education. *Higher Education: Who Pays? Who Benefits? Who Should Pay?* New York: McGraw-Hill, June 1973.

Cohn, Elchanan; Gifford, Adam; and Sharkansky, Ira. "Benefits and Costs of Higher Education and Income Redistribution: Three Comments." *Journal of Human Resources* 5 (Spring 1970): 222-236.

Coleman, James. *Equality of Education Opportunity.* Washington, D.C.: U.S. Government Printing Office, 1966. ED 012 275. MF-$1.62; PC-$47.80.

College Entrance Examination Board. *Unmet Needs.* Report on Student Financial Aid Problems from the CSS Student Advisory Committee, 1976. ED 129 154. MF-$0.98; PC-$7.87.

Commager, Henry Steele. "The Cost of Attendance, Who Should Pay?" *New York Times Magazine,* February 26, 1961.

Committee on Economic Development. *The Management and Financing of College.* New York: Committee on Economic Development, October 1973. ED 090 829. MF-$0.98; PC-$9.37.

Commonwealth of Kentucky Council on Higher Education. *Degrees and Other Formal Awards Conferred by Kentucky Colleges and Universities,* 1979. ED 183 115. MF-$0.98.

Comptroller General of the United States. "Inconsistencies in Awarding Financial Aid to Students and Four Federal Programs." Washington, D.C.: Report to the Congress of the United States, HRD-79-16, May 11, 1979. ED 176 680. MF-$0.98; PC-$7.55.

Corazzini, A.; Dugan, D.; and Grabowski, H. "Determinants of Distributional Aspects of Enrollment in U.S. Higher Education." *Journal of Human Resources* (Winter 1972); 39-50.

Corwin, Thomas, and Knepper, Paula R. *An Analysis of S. 311: The College Tuition Tax Relief Act.* American Council on Education, Policy Analysis Special Report, October 1977. ED 145 750. MF-$0.98; PC-$6.05.

Deitch, Kenneth M. "When Does an Increase in the Cost of Education Lead to an Increase in BEOG?" Cambridge, Mass.: The Sloan Commission on Government and Higher Education, 1979. ED 184 453. MF-$0.98; PC-$3.05.

Dresch, Stephen P. "A Critique of Planning Models for Postsecondary Education." *Journal of Human Resources* 10 (May/June 1975a) 245-301.

——— "Demography, Technology and Higher Education: Toward a Formal Model of Educational Adaptation." *Journal of Political Economy* 83 (1975b).

Ellis, Katz. "The States Rediscovered: Education Policymaking in the 1970's." *State Government* (Winter 1980).

Essenwein, Gregg, and Karr, John. "Median Income and the Tax Burden." Memorandum, Congressional Research Service, Library of Congress, May 9, 1978.

Fife, Jonathan D. *The College Student Grant Study.* University Park: Center for the Study of Education, Pennsylvania State University, May 1975. ED 112 794. MF-$0.98; PC-$6.05.

Finn, Chester E., Jr. "The Half-Cost Perplex." *The Chronicle of Higher Education,* December 15, 1975.

——— *Scholars, Dollars and Bureaucrats.* Washington, D.C.: The Brookings Institution, 1978.

Frances, Carol. *An Economist Looks at Low Tuition.* Washington, D.C.: American Council on Education, 1977a.

——— "Rationales for Setting Tuition Levels at Public Institutions." *Educational Record* 58 (1977b): 66-82.

——— *Is There or Isn't There a Middle Income Crunch?"* Washington, D.C.: Economics and Finance Unit, American Council on Education, January 1979. ED 167 005. MF-$0.98; PC-$3.05.

Freeman, R. A. "Last Chance to Save the Private College: A Special Report on the Financing of Higher Education." Washington, D.C.: The American Conservatives Union, 1969.

Freeman, Richard B. "Overinvestment in College Training." *Journal of Human Resources* 10 (1975): 287-311.

——— *The Overeducated American.* New York: Academic Press, 1976.

——— "The Facts About the Declining Economic Value of College." *Journal of Human Resources* 15 (1980): 124-143.

Friedman, Milton. "Role of Government in Education." In *Economics and the Public Interest,* edited by R. A. Solo. New Brunswick, N.J.: Rutgers University, 1954.

——— "The Higher Schooling in America." *The Public Interest,* Spring 1968.

Froomkin, Joseph. *Aspirations, Enrollments and Resources.* Washington, D.C.: Department of Health, Education, and Welfare, Office of Education, 1970. ED 037 183. MF-$0.98; PC-$10.87.

——— *Needed: A New Federal Policy for Higher Education.* Washington, D.C.: Institute for Educational Leadership, George Washington University, 1978.

Gill, Mary. "The Basic Educational Opportunity Grant: An Implementation Study." Course paper, Sonoma State College, Sonoma, Calif., May 1978.

Gladieux, Lawrence E., and Wolanin, Thomas R. *Congress and the Colleges.* Lexington, Mass.: Lexington Books, 1976.

Gladieux, Lawrence E., and Byce, Charles. "As Middle-Income Student Aid Expands, Are Low-Income Students Losing Out?" Presentation at the 8th Annual Conference of the Southeastern Association of Educational Opportunity Program Personnel, Jackson, Miss., March 4, 1980.

Glenny, Lyman A. "The State Budget Process: Roles and Responsibilities." In *The Financing of Postsecondary Education in the 1980's*, edited by Fred F. Harclerod. Tuscon: Center for the Study of Higher Education, University of Arizona, 1979. ED 181 778. MF-$0.98; PC-$10.77.

Hansen, Janet. *The State Student Incentive Grant Program: An Assessment of the Record and Options for the Future.* Paper prepared for the Sloan Commission on Government and Higher Education, 1978. ED 179 174. MF-$0.98.

Hansen, W. Lee. "Equity and the Finance of Higher Education." *Journal of Political Economy* 80 (1972): 260-274.

Hansen, W. Lee, and Lampman, Robert J. Basic Opportunity Grants for Higher Education: Will the Outcome Differ From the Intent? *Challenge Magazine* (Nov.-Dec. 1974).

Hansen, W. Lee, and Nelson, F. Howard. "The Distributional Efficiency of Benefits for a Student Financing Program With Payment Obligations Contingent Upon Future Income." Madison: Department of Economics, University of Wisconsin-Madison, October 1977.

Hansen, W. Lee, and Weisbrod, Burton A. *Benefits, Costs and Finance of Public Higher Education.* Chicago: Markham Publishing Company, 1969. (Based on a study conducted at the request of State Representative Jesse Unruh of the California State Legislature in 1967. Institute for Research on Poverty: Discussion papers. Madison: University of Wisconsin-Madison, January 1974).

______ "Income Redistribution Effects of Higher Education." *American Economic Review* 15 (1970): 364-369.

______ "A New Approach to Higher Education Finance." *Financing Higher Education: Alternatives for the Federal Government.* M.D. Orwig, ed. Iowa City: American College Testing Program, 1971a.

______ "On the Distribution of Costs and Benefits of Public Higher Education: A Reply." *Journal of Human Resources* 6 (1971b): 363-374.

______ "Who Pays for a Public Expenditure Program?" *National Tax Journal.* 24 (1971c): 515-517.

______ "Distributional Effects of Public Expenditure Programs." *Public Finance* 27 (1972) 414-420.

Harcleroad, Fred F. "The Case for Low Tuition and Moderate Student Aid." Presentation to the Tuition Symposium of the Oregon Student Lobby and the Oregon State Board of Higher Education, Portland, Ore., November 18, 1978.

Hartman, Robert W. "A Comment on the Pechman-Hansen-Weisbrod Controversy." *Journal of Human Resources* 5 (Fall 1970): 519-523.

——— "Equity Implications of State Tuition Policy and Student Loans." *Journal of Political Economy* 80 (1972): 260-274.

——— "Induced Tuition Changes." unpublished manuscript. Washington, D.C.: The Brookings Institution, October 1976.

Hoenack, Stephen. *Private Demand for Higher Education in California-Berkeley.* Berkeley: Office of Analytical Studies, University of California, 1967.

Hoenack, Stephen A., and Weiler, William A. "Cost-Related Tuition Policies and University Enrollments." *Journal of Human Resources* 11 (1976): 333-359.

Holmstrom, Engin Inel. "Higher Education and Social Mobility: A Promise Still Kept." Paper presented at the Annual Meeting of the American Association for Higher Education, Chicago, 1976. ED 127 890. MF-$0.98; PC-$3.05.

Holmstrom, Engin Inel, and Bisconti, A.S. *Transfer from Junior to Senior Colleges.* Washington, D.C.: Office of Research, American Council on Education, 1974. ED 093 422. MF-$0.98; PF-$10.87.

Hyde, William D., Jr. "The Effect of Tuition and Financial Aid on Access and Choice in Postsecondary Education." Paper presented at the Postsecondary Education Finance Conference, Denver, Colorado, November 1977. ED 153 541. MF-$0.98; PC-$6.95.

Illinois Board of Regents. "Student Financial Aids Report." Springfield, Ill.: Illinois Board of Regents, October 1979.

Jacobson, Robert L. "The Great Accreditation Debate: What Role for Government." *The Chronicle of Higher Education,* June 16, 1980.

Jencks, Christopher. *Inequality: A Reassessment of the Effect of Schooling in America.* New York: Basic Books, 1972.

Karr, John. "Estimates and Projections of Federal Tax, State and Local Taxes and Social Security Tax Payments of Four Member Families at Various Income Levels: 1950, 1977, 1980, and 1985." Washington, D.C.: Congressional Research Service, Library of Congress, October 27, 1977.

Keene, Roland; Adams, Frank C.; and King, John E., eds. *Work and the College Student.* Proceedings of the First National Convention on Work and the College Student, Southern Illinois University at Carbondale, June 4-6, 1975. Carbondale, Ill.: Southern Illinois University Press, 1976.

Kellett Commission. *A Forward Look: Report of the Governor's Commission on Education.* Madison: State of Wisconsin, Governor's Commission on Education, 1970.

King, Eric E. "Enrollment and Tuition—A Model for Pennsylvania Colleges and Universities." Course paper, Shippensburg State College, Shippensburg, Pa., August 4, 1977.

Kleiman, Dean. "Is College Really Worth It?" *New York Times,* October 21, 1979.

Kohn, Meir G.; Manski, Charles F.; and Mundel, David S. "An Empirical Investigation of Factors Which Influence College Going Behaviors." National Science Foundation, Grant #GI-38395. The Rand Corporation, October 1973.

Lavin, David E., Alba, Richard D.; and Silberstein, Richard A. "Open Admissions and Equal Access: A Study of Ethnic Groups in the City University of New York." *Harvard Education Review* 49: (February 1979) 53-92.

______ *Conflict and Opportunity: Access to Higher Education*. New York: Free Press, 1980.

Lee, John B. *Interstate Distribution of Student Financial Aid Funds*. Papers in Education Finance, No. 6. Denver, Colo. Education Commission of the States, Education Finance Center, November 1977. ED 156 003. MF-$0.98; PC-$6.05.

Leslie, Larry L. *The Trend Toward Government Financing of Higher Education Through Students: Can the Market Model Be Applied?* University Park: Center for the Study of Higher Education, Pennsylvania State University, January 1973. ED 077 458. MF-$0.98; PC-$3.05.

______ *Higher Education Opportunity: A Decade of Progress*. AAHE-ERIC/Higher Education Research Report No. 3. Washington, D.C.: American Association for Higher Education, 1977. ED 142 125. MF-$0.98; PC-$7.87.

Leslie, Larry L., and Fife, Jonathan D. "The College Grant Study: The Enrollment and Attendance Impacts of Student Grant and Scholarship Programs." *Journal of Higher Education* 45 (December 1974): 651-671.

Levin, Henry M. "What Are the Returns on a College Education?" In *Students and Their Institutions: A Changing Relationship*, edited by J. W. Peltason and Marcy V. Messengale. Washington, D.C.: American Council on Education, 1979.

Longanecker, David. Address on the topic of "Economic Returns on Investment in Higher Education." Congressional Budget Office, U.S. Congress, Washington, D.C., 1980. Also see Russell W. Rumberger, "The Economic Decline of the College Graduates: Fact or Fallacy?"; David Witmer, "Has the Golden Age of American Higher Education Come to an Abrupt End?"; and Richard B. Freeman, "The Facts About the Declining Economic Value of College." *Journal of Human Resources* 15 (1980): 99-143.

Luecke, Daniel F., and McGinn, Noel F. "Regression Analyses and Education Production Functions: Can They Be Trusted?" *Harvard Education Review* 45: (August 1975).

Machlis, Peter D. "The Distributional Effects of Public Higher Education in New York City." *Public Finance Quarterly* January 1973.

McConnell, T. R.; Berdahl, Robert O.; and Fay, Margaret A. *From Elite to Mass to Universal Higher Education: The British and American Transformations*. Berkeley: Center for Research and Development in Higher Education, University of California, 1973. ED 080 054. MF-$0.98; PC-$9.05.

McGuire, Joseph W. "The Distribution of Subsidy to Students in California Public Higher Education." *Journal of Human Resources* 11 (1977): 343-353. Also see Hansen and Weisbrod's reply to McGuire in the *Journal of Human Resources*, 12 (1978).

McPherson, Michael S. "The Demand for Private Higher Education." In *Public Policy and Private Higher Education*, edited by David G. Breneman, Chester E. Finn, and Susan C. Nelson, Washington, D.C.: The Brookings Institution, 1978.

Mortensen, Tom. *Tertiary Education in Minnesota.* Commission on Minnesota's Future, April 1975. Also see Tom Mortensen, *Public College Enrollment in Minnesota's Changing Population Pattern, 1970-85.* University of Minnesota, Minneapolis-St. Paul, 1976.

Mundel, David S., and the Rand Corporation. "Recent Developments in the Understanding of the Determinants of Demand for Postsecondary Education." Paper for Southern Economic Association. November 14-16, 1974.

National Association of Independent Colleges and Universities. "Federal Student Assistance and Categorical Programs." Washington, D.C.: National Association of Independent Colleges and Universities, January 1978. ED 149 705. MF-$0.98; PC-$10.82.

______ *NAICU News.* "1979 State Legislative Roundup," October 1979.

National Association of State Scholarship and Grants Programs 11th Annual Survey 1979-80 Academic Year. Joseph D. Boyd, ed. Deerfield, Ill.: Illinois State Scholarship Commission, ED 179 145. MF-$0.98; PC-$7.87.

National Board on Graduate Education. *Policy Alternatives Toward Graduate Education.* Washington, D.C. National Board of Graduate Education, 1974.

National Center for Education Statistics. Financial statistics data tapes, 1976-77.

______ *Earned Degrees Conferred.* Washington, D.C.: 1977-78.

______ *Associate Degrees and Other Formal Awards Below the Baccalaureate: Analysis of 6-year Trends.* Washington, D.C.: 1978a. ED 169 962. MF-$0.98; PC-$3.05.

______ Special Tabulation from Table 23. "Total Enrollment in Institutions on Higher Education by Ethnicity, Sex and Attendance Status of Student and by Control and Level of Institution: Aggregate United States." Washington, D.C.: Fall 1978b.

______ *Digest of Education Statistics.* Washington, D.C.: 1980a. ED 172 458. MF-$0.98.

______ *Opening Fall Enrollment.* Washington, D.C.: 1980b.

National Commission on Financing Postsecondary Education. *Financing Postsecondary Education in the United States.* Washington, D.C.: Government Printing Office, December 1973.

National Council on Independent Colleges and Universities. *Financing of Postsecondary Education with Special Reference to the Private Sector.* Washington, D.C.: National Council on Independent Colleges and Universities, 1974.

National Institute of Education. *Higher Education Financing in the Fifty States*. Washington, D.C.: National Institute of Education, September 1979. ED 180 417. MF-$0.98.

National Public Radio. *Options in Education: Paying for College*. Program Number 243. Washington, D.C. 1980.

Nelson, Susan C. *The Equity of Public Subsidies for Higher Education: Some Thoughts on the Literature*. Papers in Education Finance No. 5, Denver, Colo.: Education Finance Center, Education Commission of the States, 1978.

Newman, Frank. *Report on Higher Education*. (First Newman report.) Submitted to the Secretary of the U.S. Department of Health, Education, and Welfare. Washington, D.C., March 1971.

Newman, Frank, chairman, Special Task Force to the Secretary of the U.S. Department of Health, Education, and Welfare. *National Policy and Higher Education*. (Second Newman Report) Washington, D.C., October 1973. ED 082 719. MF-$0.98; PC-$17.40.

New York Times: "Fewer Students With Top Marks Apply to City U.: Study Says Decline Began After Start of Tuition." November 7, 1979.

______ "Study of Student Grant Program Finds 55% of Payments in Error." December 14, 1979.

______ "To Separate City University Governance From Politics." Editorial, April 17, 1980.

Nickerson, James F., and Stampen, Jacob. "Political and Programmatic Impacts of Statewide Governance in Higher Education." Edith K. Mosher and Jennings Wagoner, eds. *The Changing Politics of Education: Prospects for the 1980's*. Berkeley: McCutchan, 1978.

Nulty, Leslie Ellen. *Understanding the New Inflation: The Importance of Basic Necessities*. Washington, D.C.: The Center for Economic Alternatives. 1977.

Okun, Arthur. *Equality and Efficiency: The Big Tradeoff*. Washington, D.C.: The Brookings Institution, 1975.

O'Neil, June. *Resources Use in Higher Education: Alternatives for the Federal Government*. Iowa City, Iowa: American College Testing Program, 1971.

Orwig, M.D., ed. *Financing Higher Education: Alternatives for the Federal Government*. Iowa City, Iowa: The American College Testing Program, 1971.

Pechman, Joseph A. "The Distributional Effects of Public Higher Education in California." *Journal of Human Resources* 5 (Summer 1970).

______ The Distribution of Costs and Benefits of Public Higher Education: Further Comments." *The Journal of Human Resources*. 6 (Summer 1971): 375-376.

______ "Note on the Intergenerational Transfer of Public Higher Education Benefits." *Journal of Political Economy*. 80: 256-260.

Pell, Caliborne. Remarks before the College Entrance Examination Board, October 27, 1971. Entered in the *Congressional Record*, 92nd Congress, 1st Session, 1971, pp. 37864-37865.

Peterson, Iver. "City Fiscal Critics Focus on Free Tuition." *New York Times*, November 22, 1975.

Power, Eugene B. "Public Higher Education and the Low Tuition Principle." *Michigan Quarterly Review* 1: (April 1962).

Pressman, Jeffery L., and Wildavsky, Aaron B. *Implementation.* Berkeley: University of California Press, 1973.

Radner, R., and Miller, L. "Demand and Supply in U.S. Higher Education: A Progress Report." *American Economic Review* (May 1970) 326-334.

Ratnovsky, Alexander. "Proposal for Determining Expected Family Financial Contribution for Postsecondary Education." Unpublished paper. U.S. Office of Education, Office of Evaluation and Dissemination/PPD, Washington, D.C., April 12, 1979.

Rice, Lois D., ed. *Student Loans: Problems and Policy Alternatives.* New York: College Entrance Examination Board, 1977. ED 143 244. MF-$0.98.

Rivlin, Alice M. *Toward a Long-Range Plan for Federal Financial Support for Higher Education: A Report to the President.* Washington, D.C.: Department of Health, Education, and Welfare, January 1969. ED 038 102. MF-$0.98; PC-$7.77.

Rose, Stephen J. *Social Stratification in the United States.* Baltimore: Social Graphics Co., 1979.

Rumberger, Russell W. "The Economic Decline of the College Graduates: Fact or Fallacy?" *Journal of Human Resources* 15: (1980): 99-112.

Rusk, James J., and Leslie, Larry L. "The Setting of Tuition in Public Higher Education." *Journal of Higher Education* 49 (1978): 531-547.

Sanda, Bill, and Stedman, Jim. "Student Assistance: Issues in the Development of a Need Analysis System." Washington, D.C.: Education and Public Welfare Division, Congressional Research Service, Library of Congress, September 20, 1979.

Sloan Commission on Government and Higher Education. *A Program for Renewed Partnership.* Cambridge, Mass.: Ballinger Publishing Company, 1980.

Smith, Patricia, and Kent, Laura, eds. *The Impact of Basic Grant Program on the States.* Washington, D.C. American Council on Education, August 1977.

Speis, Richard R. "The Effect of Rising Costs on College Choice: A Study of the Application Decisions of High Ability Students." College Entrance Examination Board, New York 1978. ED 154 686. MF-$0.98.

Stahr, Elvis J. "The Erosion of the Principles of Free Education." Address to the St. Thomas Moore Society, Indianapolis, April 29, 1965.

Stampen, Jacob. "University of Wisconsin Center System: Preliminary Study of the Pilot Project Being Carried on at the Barron and Fond du Lac Centers." Madison: University of Wisconsin System, April 1974. Mimeographed. Also see AASCU *Memo to the President* "Wisconsin Low Tuition Experiment Ends: Tuitions up, Enrollments Down."

——— *Conflict, Accountability and the Wisconsin Idea: Relations Between Government and Higher Education in Wisconsin 1965 to 1978.* For the Sloan Commission on Government and Higher Education, 1979. ED 184 432. MF-$0.98; PC-$14.08.

_____ "Enrollment Trends and College Costs." *AASCU Studies.* Washington, D.C.: American Association of State Colleges and Universities, January 1980. ED 183 088. MF-$0.98.

State of Illinois, Board of Higher Education, "Tuition in Illinois Public Universities." Staff paper. Springfield, Ill., February 3, 1976.

State of New Jersey Commission on Financing Postsecondary Education. "An Analysis of the Monetary Benefits and Costs of Higher Education in New Jersey in 1975-76." (The Booher Commission), June 1976. ED 125 471. MF-$0.98; PC-$5.96.

Teachers Insurance and Annuity Association/College Retirement Equities Fund. *Digest of Statistics on Higher Education in the United States.* 1974-75 and 1978-79. ED 176 710. MF-$0.98; PC-$4.36.

Thackrey, Russel I. *The Future of the State University.* Urbana: University of Illinois Press, 1971.

_____ "Comments on the Carnegie Commission Report: Higher Education: Who Benefits, Who Pays, Who Should Pay?" *Proceedings of the National Association of State Universities and Land-Grant Colleges.* 87th Annual Convention, 1973. ED 093 229. MF-$0.98; PC-$4.46.

_____ "If You're Confused About Higher Education Statistics, Remember: So Are the People Who Produce Them." *Phi Delta Kappan,* February 1975.

_____ *What's Behind the Rising Cost of Education.* National Association of State Universities and Land-Grant Colleges, September 1976.

Thierney, Michael L. "The Impact of Financial Aid on Public/Private Postsecondary Education: Some Policy Implications." University Park: Center for the Study of Higher Education, The Pennsylvania State University. Paper presented at the Association for the Study of Higher Education Annual Meeting, Washington, D.C., April 19, 1979. ED 174 181. MF-$0.98; PC-$4.46.

Washington Star. "Errors in Student Aid." December 19, 1979.

Weathersby, George B. "A Broad View of Individual Demand for Postsecondary Education: Major Policy Issues." Paper presented at the National Center of Higher Education Management Systems, National Invitational Seminar, Reston, Va., May 16, 1974.

_____ "The College Student Grant Study: A Comment." *Journal of Higher Education* 46 (September/October 1975): 623-652.

Weiss, Samuel. "Fewer Students with Top Marks Apply to City U." *New York Times,* November 7, 1979.

Windham, Douglas M. *Education Equality and Income Redistribution.* Lexington, Mass.: D.C. Health and Company, 1970.

Young, Kenneth, ed. *Exploring the Case for Low Tuition in Public Higher Education.* Washington, D.C.: American Association of State Colleges and Universities, American Association of Community and Junior Colleges, National Association of State Universities and Land-Grant Colleges, 1974.

Zacharias, Jerold R. *Equal Opportunity Bank.* Report of the Panel on Educational Innovation, The President's Science Advisory Committee, September 1967.

Zimmerman, Dennis. "Expenditure-Tax Incidence Studies, Public Higher Education and Equity." *National Tax Journal,* March 1973.

AAHE-ERIC Research Reports

Ten monographs in the AAHE-ERIC Research Report series are published each year, available individually or by subscription. Single copies are $3 for AAHE members, $4 each for non-members. Orders for 25 or more are eligible for bulk discounts. Add 15% postage/handling fee for all orders under $15. Orders under $15 must be prepaid.

Subscriptions to ten issues (beginning with date of subscription) is $25 for AAHE members, $35 for nonmembers. Order from Publications Department, American Association for Higher Education, One Dupont Circle, Suite 780, Washington, D.C. 20036; 202/293-6440. Write or phone for a complete list of Research Reports and other AAHE publications.

1979 Research Reports

1. Women in Academe: Steps to Greater Equality
   Judith Gappa and Barbara Uehling
2. Old Expectations, New Realities:
   The Academic Profession Revisited
   Carol Herrnstadt Shulman
3. Budgeting in Higher Education
   J. Kent Caruthers and Melvin Orwig
4. The Three "R's" of the Eighties: Reduction,
   Retrenchment, and Reallocation
   Kenneth P. Mortimer and Michael L. Tierney
5. Occupational Programs in Four-Year Colleges:
   Trends and Issues
   Dale F. Campbell and Andrew S. Korim
6. Evaluation and Development of Administrators
   Robert C. Nordvall
7. Academic Advising: Getting Us Through the Eighties
   Thomas J. Grites
8. Professional Evaluation in the Eighties:
   Challenges and Response
   Glenn F. Nyre and Kathryn C. Reilly
9. Adult Baccalaureate Programs
   Marilou Denbo Eldred and Catherine Marienau
10. Survival Through Interdependence: Assessing the Cost and Benefits of Interinstitutional Cooperation
    Lewis D. Patterson

1980 Research Reports

1. Federal Influence on Higher Education Curricula
   William V. Mayville
2. Program Evaluation
   Charles E. Feasley
3. Liberal Education in Transition
   Clifton E. Conrad and Jean C. Wyer
4. Adult Development: Implications for Higher Education
   Rita Preszler Weathersby and Jill Mattuck Tarule
5. A Question of Quality: The Higher Education Ratings Game
   Judith K. Lawrence and Kenneth C. Green
6. Accreditation: History, Process, and Problems
   Fred F. Harcleroad
7. Politics of Higher Education
   Edward R. Hines and Leif S. Hartmark
8. Student Retention Strategies
   Oscar T. Lenning, Ken Sauer, Philip E. Beal
9. The Financing of Public Higher Education:
   Low Tuition, Student Aid and the Federal Government
   Jacob Stampen
10. University Reform: An International Review
    Philip G. Altbach